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THE ECONOMIC DEVELOPMENT OF CANADA AND NEWFOUNDLAND

by

Bruce F. Jeffery

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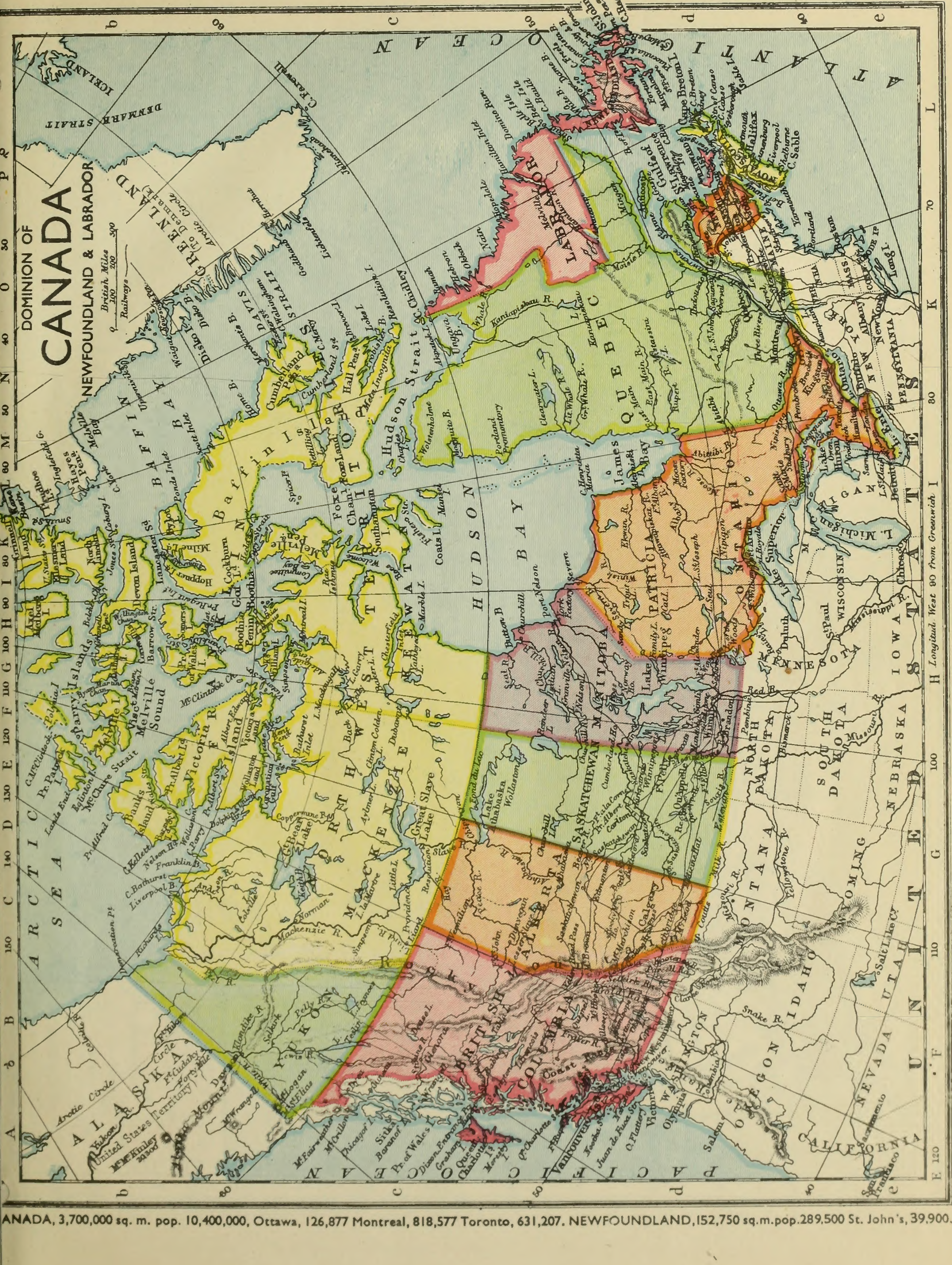
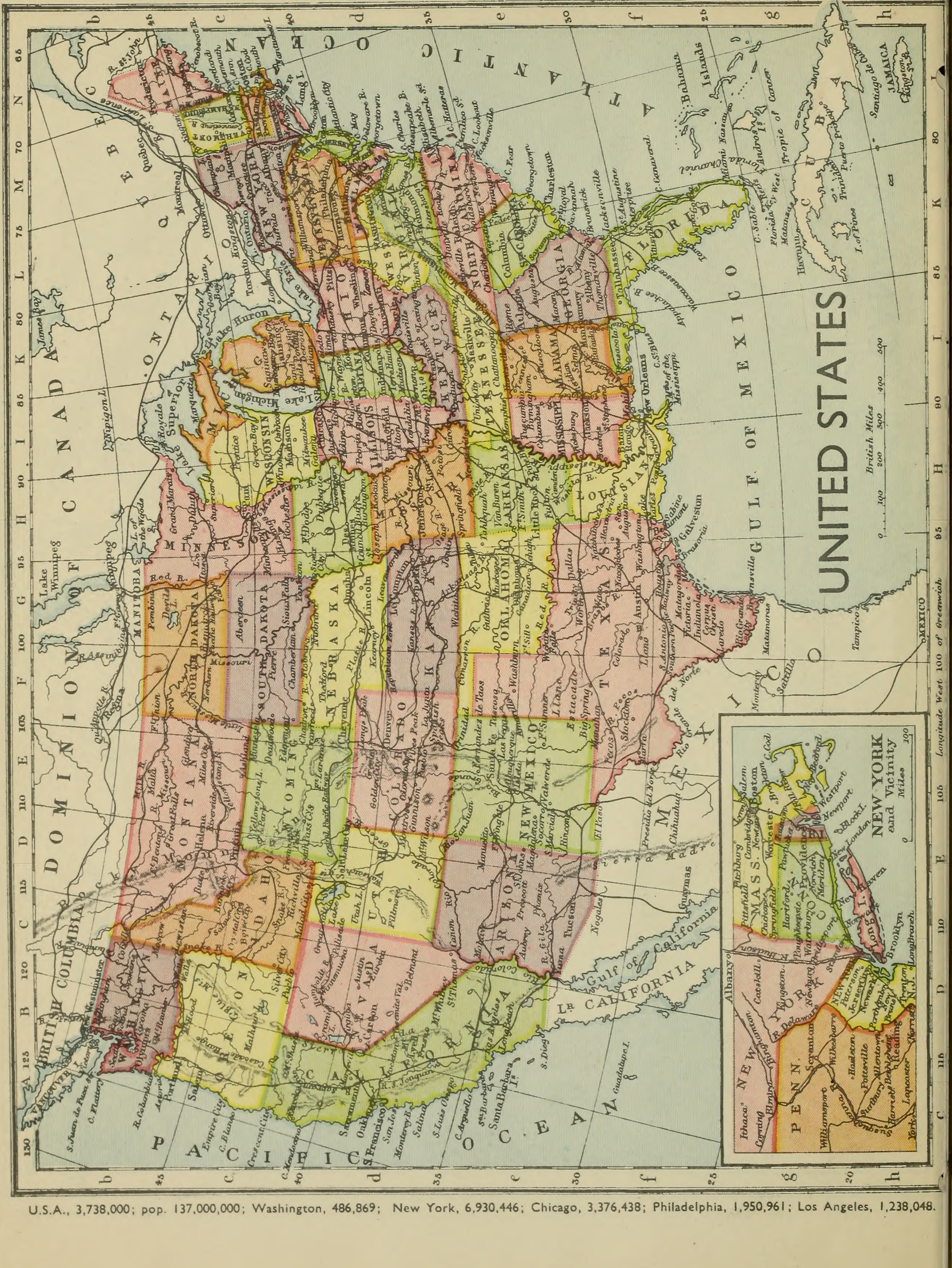


ANADA, 3,700,000 sq. m. pop. 10,400,000, Ottawa, 126,877 Montreal, 818,577 Toronto, 631,207. NEWFOUNDLAND,152,750 sq.m.pop.289,500 St. John's, 39,900.



U.S.A., 3,738,000; pop. 137,000,000; Washington, 486,869; New York, 6,930,446; Chicago, 3,376,438; Philadelphia, 1,950,961; Los Angeles, 1,238,048.

THE ECONOMIC DEVELOPMENT OF CANADA AND NEWFOUNDLAND

CHAPTER I

PHYSIOGRAPHY

The Dominion of Canada comprises the whole northern part of the North American continent with its islands, except the United States territory of Alaska and the territory of Newfoundland. It includes the whole Arctic archipelago between Davis Strait and the connecting waters northward to the 60th meridian on the east and the 141st meridian on the west.

The Dominion is bounded on the west by the Pacific Ocean and Alaska; on the south by the United States; on the east by the Atlantic Ocean, the territory of Newfoundland, Davis Strait, and the Danish territory of Greenland; northward it extends to the North Pole.

AREA

The area of the Dominion is 3,694,863 square miles, a figure which may be compared with that of 3,783,395 square miles for the United States and its dependent territories, 2,974,581 the total area of Australia, 3,275,510 the area of Brazil, 1,805,252 the area of India, 121,633 the area of the British Isles. Canada's area is more than 27 per cent of the total area of the British Empire.

POLITICAL SUBDIVISIONS

Canada is divided from east to west into the following provinces: the Maritime Provinces of Nova Scotia, Prince Edward Island, and New Brunswick, all three comparatively small in area; Quebec, covering a strip south of the St. Lawrence River and the whole territory north of the St. Lawrence River and east of the Ottawa River to Hudson Strait, except the coast of Labrador; Ontario, extending northward from the Great Lakes to Hudson Bay; Manitoba, Saskatchewan, and Alberta, the provinces of the interior continental plain, extending from the United States boundary to 60° north latitude; and British Columbia, the province of the Western coast and mountain area, also extending between the United States boundary and 60° north latitude.

North of the area included in the provinces the country is divided into the Yukon Territory to the west, bordering on Alaska, and the Northwest Territories. The latter is subdivided into three provisional districts: that of Mackenzie comprises the mainland between Yukon and the 102nd meridian of west longitude; the District of Keewatin comprises in general the remainder of the mainland between the District of Mackenzie and Hudson Bay; the District of Franklin comprises in general the Arctic archipelago.

LAND AND FRESH WATER AREAS

The total land and fresh water areas of Canada are as follows:

Land	3,466,556 sq. miles
Fresh Water	228,307
Total [1]	3,694,863

LAKES and RIVERS

The fresh-water area of Canada is unusually large, constituting over 6 per cent of the total area of the country. The outstanding feature is the Great Lakes, particulary notable for the depth of Lake Superior, 1,302 feet, and for the shallowness of Lake St. Clair, 23 feet. The areas of the Great Lakes are as follow:

Lake	Area (sq. mi.)
Superior	31,820
Michigan	22,400
Huron	23,010
St. Clair	460
Erie	9,940
Ontario	7,540

Lake Superior is the largest body of fresh water in the world. The whole of Lake Michigan is within the United States, the International Boundary passing through the center of the other lakes. The total length of the St. Lawrence waterway is 1,900 miles. The Great Lakes together with the St. Lawrence River form the most important system of waterways on the continent, and one of the world's most notable fresh-water transportation routes. In addition to the Great Lakes there are many other remarkably large lakes, eleven of them all over 1,000 square miles in area.[2]

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[1] Dominion Bureau of Statistics, The Canada Year Book, p. 7.

[2] Ibid., p. 11.

LENGTH OF PRINCIPAL RIVERS

In the following table showing the lengths of the principal rivers of Canada, the tributaries are indented:[3]

River	Miles
Flowing into Atlantic Ocean:	
St. Lawrence	1,900
Ottawa	696
Saguenay	405
St. John	399
Flowing into Hudson Bay:	
Nelson	1,600
Red	545
Assinaboine	590
Saskatchewan	1,205
Churchill	1,000
Albany	610
Flowing into Pacific Ocean:	
Columbia	1,150
Fraser	850
Porcupine	525
Yukon	1,765
Flowing into Arctic Ocean:	
Mackenzie	2,514
Laird	570
Athabasca	765
Peace	1,054
Coppermine	525
Back	605

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[3] *Ibid.*, p. 14.

CLIMATE

The climate of a country of such vast extent and varied features as Canada naturally differs very much in different places, and in this respect British Columbia on the Pacific Coast and Nova Scotia and the other Atlantic regions are very dissimilar to the prairie region of the center. So different is the climate of one part of the Dominion from that of other parts that Canada has been said to present the climates and productions similar to those of northwest and central Europe.

Ontario and the region of the Upper St. Lawrence may be described as temperate. Generally the climate of the Dominion shows considerable extremes of heat and cold, but, except in some of the coast regions, the exceeding dryness of the atmosphere makes both extremes of temperature more pleasant and healthful than similar temperatures in Britain. Aside from the parts of the Dominion that fall within the Arctic Circle, Labrador and all the country east of Hudson Bay have the most severe climate.

The Pacific Coast region is decidedly moist. The Western Ontarion peninsula has the finest climate, favorable to fruits, shrubs and flowers that cannot stand the severe winter elsewhere. The Mackenzie River district-- especially in the Peace River section, where the temperature throughout the year is remarkably genial-- possesses a climate much less severe than one might expect, and would allow of agriculture almost to the Arctic Ocean.

VEGETATION

The forests are of great extent, and the timber trade is a great source of wealth, the annual value of the timber and forest products being over $190,000,000. In the forests grow more than sixty kinds of trees. Among the most valuable are the white and red pine, white and black spruce, maple, ash, beech, oak, walnut, butternut, chestnut, basswood, birch, cedar and hickory.

Over most parts of the Dominion, except in the prairie regions of the interior, good timber is found, though in the older and more closely-settled parts the forests have been largely cleared off. The forests of British Columbia produce the largest timber, the Douglas fir being the chief tree. The balsam poplar grows to an immense size on the Athabasca, Peace, and Mackenzie rivers, and even at the mouth of the last, within the Arctic Circle, trees of some size are found. The Banksian pine grows to a height of 100 feet on the southern shores of Hudson Bay, and spruce suitable for building purposes, and the tamarack or larch, extend as far north as Fort George on its east and Fort Churchill on its west shore. The sugar-maple, a forest tree attaining a height of 120 feet, flourishes in the greater part of the St. Lawrence valley, and is much valued for the sugar that is obtained from it.[4]

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[4] Ibid., p. 283.

There are a great many varieties of wild fruits, as the wild plum, wild cherry, raspberry, service-berry, carnberry, gooseberry, strawberry, black and red currant, wild vine, blackberry, buffalo-berry, etc., and numerous wild flowers and flowering shrubs. Of the wild druits, the raspberry, cranberry and blueberry are alone important economically.[5]

There are rich pasture grasses but they cannot be utilized in cultivation.

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[5] *Ibid.*, p. 258

CHAPTER II

HISTORY

THE PERIOD of DISCOVERY

At a very early date the Norwegians discovered and colonized Iceland. From there, a colony hade been established in Greenland, which at that time was not so cold as it is now. In the year 1,00, A. D., Leif Ericson, a Norseman, led an expedition from Greenland southward, and touched the shores of the parts now known as Newfoundland and Massachusetts; but he made no permanent settlement and his discovery led to no important results. It is believed that his expedition visited the shores of the mainland of what is now Canada.[6]

Christopher Columbus is regarded as the real discoverer of America. His discoveries came as a result of his efforts to find a commercial waterway to India and China by sailing westward from Europe. He discovered land on October 12, 1492. It was one of the Bahama Islands, but, supposing he had reached some of the islands of India, he called the natives Indians, and the islands of those seas were later named the West Indies.

The first effective contact of Europeans with Canada was not made until the end of the 15th century. John Cabot, an Englishman, and his son, Sebastian, sailing from Bristol, reached the shores of Newfoundland in 1497. There they found the

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[6] The Americana, Volume 4, "Canada," Section 2.

remains of cabins that had been used by the earlier Norse fishermen. Continuing their way, they touched at Cape Breton, Prince Edward Island, and, perhaps, Nova Scotia. They reached the shores of Labrador, and probably were the first white men to see the mainland of what is now Canada. Upon their arrival on the mainland, they planted the English flag upon it.

Soon after Cabot's discovery, fishermen from Europe began to go in considerable numbers to the Newfoundland Banks, and in time they reached the coasts of the mainland of Canada and established settlements there.

THE INDIAN PERIOD

The American Indians were tall, dark-haired, dark-eyed people with high cheekbones. Practice had made them keen of sight and hearing and swift of foot. They were skillful in catching the animals which abounded in the forests, and the fish with which the rivers and lakes teemed. The skins of the animals supplied them with clothes, and the flesh of these and the fish were their principal foods. They lived in wigwams made of skins or of bark and they spent their time in hunting and fishing or in war, while the women had to do the drudgery of the tribe. The Indian was true to his friends, but cruel and revengeful to his enemies.

The Indians of Canada were divided into three tribes. The Hurons and the Algonquins were the friends of the French; the Iroquois were the friends of the English.

The Hurons were the most peaceful of the tribes and soon became christians. They lived around Georgian Bay and tilled the soil to some extent. Their houses were made of bark.

The Algonquins lived in the region from Lake Superior to the Atlantic Ocean, and were the least intelligent of the tribes. They were filthy in their habits, lived in miserable wigwams and tilled the soil but little.

The Iroquois, who lived in the State of New York, were fierce and warlike. They were composed at first of five, but afterwards of six tribes, and so were sometimes called the "Six Nations." They tilled the soil and raised a large amount of corn.

THE FRENCH PERIOD

French fishermen were attracted to the rich fishing "Banks" of Newfoundland as early as 1506. But it was the French navigator Jaques Cartier who first really opened up Canada for European settlers. In 1534 Cartier in a single ship sailed up the Gulf of St. Lawrence until he could see land on each side. The following year he made another voyage and reached the Indian town of Hochelaga, to the height above which he gave the name of Mount Royal, now Montreal, and passed the winter at the mouth of the St. Charles, where the city of Quebec now stands. During the next sixty years the fisheries and the fur trade received some attention but no colonization was attempted, with the exception of the St. Lawrence valley.[7]

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[7] Ibid., Volume4, "Canada," Section 2.

It was the fur trade and the fisheries of Canada that attracted the attention of the French, and that led Champlain in 1603 to establish a base in the St. Lawrence valley. He founded Quebec in 1608 as a fort and trading post. One fur company after another failed to keep its agreements and so each lost its monopoly. In 1627 Cardinal Richelieu formed the "Company of One Hundred Associates." In return for aid in colonization the Company was granted a monopoly of the fur trade and inland fisheries. Year by year it sent rich cargoes of furs to France, but paid little attention to colonization, so in 1663 its charter was cancelled.

From 1663 to 1670 Canada was under Royal Government. The king was represented by three important officers assisted by a supreme council. An era of missionary zeal marked by aggressive attempts at colonization set in. France strove to convert the Indians, and at the same time sought to extend her influence at the expense of the British colonies to the south. To realize these aims she was in a state of continuous Indian warfare and border struggle until the Treaty of Utrecht in 1713 ended the war with Britain.[8]

During the thirty years of peace that followed, Canada made greater progress than at any other time in the French period. Many settlers came out; agriculture and commerce were encouraged, and there was general prosperity.

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[8] The Encyclopaedia Britannica, Volume V, p. 156.

HALIFAX FOUNDED

In 1749 the British founded Halifax and began to colonize Nova Scotia. With war imminent between the French and English colonists along the Ohio, Britain deemed it prudent to disperse the Acadians, chiefly along the Atlantic seaboard, and in 1755 took steps to deport them from Nova Scotia. Although this province had been ceded to Britain in 1713, many of the Acadians had refused to accept British sovereignty.

SEVEN YEARS' WAR

In 1756 the Seven Years' War began. France had no resources to cope with those of Britain in America, and British control of the sea proved decisive. On September 13, 1759, Wolfe won his great victory over Quebec, and a year later the French army in Canada surrendered at Montreal. By the Peace of Paris in 1763 the whole of New France was finally ceded to Great Britain.

THE BRITISH PERIOD

THE COLONIAL ERA

After the conclusion of peace in 1763, Canada was governed under a Royal Proclamation until 1774 when the Quebec Act was passed by the Imperial Parliament.

In 1775 the leaders of the American Revolution, hoping to make the revolt continental, invaded Canada, believing that the French would join them. The prudent leadership of Sir Guy Carleton saved the colony and the Revolutionary army withdrew.

THE UNITED EMPIRE LOYALISTS

But the American Revolution profoundly affected the economic development of Canada. The country became the refuge of thousands of American Loyalists who would not desert Great Britain. Forty thousand of them fled to Nova Scotia, New Brunswick and Ontario. The two latter provinces with but few European settlers now developed largely under the influence of the Loyalists.

UPPER AND LOWER CANADA

A prevailing French type of government was now no longer adequate in Canada, and in 1791 the British parliament passed the Constitutional Act, separating Canada at the Ottawa River into two parts, each with its own government; Lower Canada, chiefly French, retaining the old system of laws, with representative institutions now added; and Upper Canada, on the purely British model.

CONFEDERATION

Acting upon Lord Durham's suggestion, the British government passed an Act of Union in 1840 joining Upper and Lower Canada. In 1867 the British North America Act was passed by which the provinces of Ontario, Quebec, New Brunswick, and Nova Scotia were welded into the DOMINION OF CANADA.[9]

The population made a thin distribution over the relatively large area of these provinces. In Lower Canada, settlement covered a narrow strip along the St. Lawrence and a few tribu-

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[9] Ibid., Volume V, p. 159.

taries, while in Upper Canada the fringe was found along the shores of Lakes Ontario and Erie. A few miles north in each province a comparatively unpeopled wilderness was a "no-man's land" where the few settlers were pioneers with all the conditions that attach to pioneer life.

Inter-provincial trade was narrow in scope and small in volume. The total foreign trade of the first year of the Dominion of $131,000,000 shrinks to small figures when compared with the $2,333,333,333 of today. Trading connections are now had with over a hundred lands that dot the map of the world.

How small the old figures appear. Ten million bushels of wheat then-- four hundred million now. Mineral production worth ten millions then; nearly two hundred and fifty millions now. Ten million acres tilled then; nearly two hundred and fifty millions now. And yet we are told that Canada, even today, is only beginning to grow wheat, mine minerals, catch fish, and develop timber and pulp resources.

GROWTH SINCE CONFEDERATION

It is difficult to compress into a paper of the present limitations all the outstanding changes since the first Dominion Day, July 1, 1867. The driest of figures takes on a tinge of romance. The wheat yield has increased by 4,000 per cent; the tilled area by 600 per cent; the mining production by 2,500 per cent; the forest production by 1,000 per cent; and the fishery production by the same; and these are only samples of growth.

Most of what is included in manufacturing also dates from 1867. Then, agriculture was Canada's basic industry, with a big lead; now the industrial development of the Dominion comes first, with prodigious figures to prove its annual production and invested capital.

The four original provinces of the Confederation pact have increased to nine, with sufficient land area yet unpeopled, to carve out nine more in the coming years.

UNIFIED POSTAL RATES - 1867

The reorganization of the various departments of state, in view of the wider interests with which they had to deal, occupied much of the attention of the first parliament of the Dominion. In 1867 the postal rates were reduced and unified.

DOMINION MILITIA - 1868

In 1868 a militia system for the whole Dominion was organized.

CIVIL SERVICE ACT - 1868

In the same year the tariff was altered and systematized, and a Civil Service Act was passed.

SOUND BANKING - 1871

The banking system of the country was put on a sound basis by a series of Acts culminating in that of 1871.

DECIMAL CURRENCY - 1871

Also, in 1871, a uniform system of decimal currency was established for the whole Dominion. While the new machinery of state was thus being put into operation, other large questions presented themselves.

ECONOMIC NATIONAL POLICY

During Mackenzie's administration, 1873-78, a severe business depression affected the whole continent of America. Dominion revenues showed deficits for several years. The factories of the United States, artificially stimulated by extreme protection, sought to dump their surplus products on the Canadian market to the detriment of Canadian industries. Meanwhile the Republic, which for many years had drained Canada of thousands of artisans to work in its factories, steadily refused to consider any suggestions for improving trade relations between the two countries.[10]

Sir John A.McDonald, under the circumstances, proposed a "National Policy," or, in other words, a system of protection for Canadian industries. Mr. Mackenzie and his followers leaned toward "Free Trade," and took the position that a tariff should be used for revenue only. In the elections of 1878 Sir John MacDonald and a large majority of followers pledged to carry out "Protection" were restored to power. A Tariff was then agreed upon and has remained ever since under both Conservative and Liberal administrations, although it has been modified considerably from time to time. However,

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[10] *Ibid.*, Volume V, p. 162.

Canadians generally have come to regard it as the basis of their finance and the bulwark of their industry. As soon as it was adopted there was an almost immediate lessening of the exodus of artisans to the United States, and an improvement in the revenue and a restoration of the national credit.

IMMIGRATION

The opening years of the 20th century were marked by a long period of great prosperity. A steady stream of immigrants from Europe and the United States, sometimes rising as high as 300,000 in a single year, began to occupy the vast region of the western prairies. Further details regarding IMMIGRATION will be found in Chapter III.

NEW PROVINCES

The first province to be added to the Confederation was Manitoba, in 1870. British Columbia followed in 1871 under the promise of the Dominion government to build a railway within ten years to connect it with Ontario. Prince Edward Island joined the Dominion in 1873 upon condition that she should have regular mail connection with the mainland. With the rapid growth of the West, it was found necessary to establish two new provinces, Alberta and Saskatchewan, in 1905.

TRADE EXPANSION

With the rapid increase of population, production in Canada also greatly increased; exports, imports and revenue constantly expanded; and capital, finding abundant and profitable employment, began to flow freely into the country for further industrial development.

CHAPTER III

POPULATION AND IMMIGRATION

POPULATION

It may not generally be known that credit for taking the first census of modern times belongs to Canada. The year was 1665, and the results of it occupy 154 pages in manuscript, still to be seen in the Archives at Paris. It showed some 3,215 souls. By the end of the century the population had passed the 15,000 mark, and this was doubled in the next twenty-five years.

At the time of the British Conquest (1763) the population of New France was about 70,000 with another 10,000 scattered through what is now the Maritime Provinces. In 1791 the population of Lower Canada was 163,000, while the newly constituted province of Upper Canada numbered about 15,000; and the addition of the Gulf colonies brought the total well over 200,000. A decade later Canada began the nineteenth century with a population of probably not less than 250,000 or 260,000.

During the fifties of the nineteenth century, there was a very rapid increase in the population of Upper Canada. By the end of the century the population of Canada had reached approximately five and a quarter millions, or twenty times

that of 1800. But the most spectacular expansion of population has taken place during the present century. The opening of the "last best west" was responsible in a large measure for the increase. The western population doubled with each decade of the eighties and nineties, but it was only with the launching of a large-scale immigration movement after 1900 that western settlement and production became a first-rate economic factor. Immigration in the ten-year period, 1900 - 1910, totalled over 1,800,000, and the following ten-year period showed practically the same influx.

The story of Canada's growth in population is shown by the following table:[11]

POPULATION of CANADA, 1851 - 1921

1851	2,384,919
1861	3,156,418
1871	3,689,257
1881	4,324,810
1891	4,833,239
1901	5,371,315
1911	7,206,643
1921	8,788,483
1931	10,376,786
1936	11,028,000

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[11] *Social and Economic Conditions in the Dominion of Canada*, W. P. M. Kennedy, p. 3.

IMMIGRATION

Many bands of emigrants during the past 300 years have left their homes in foreign lands and found their way to Canadian shores and played their part in making up what today we may fairly designate the Canadian Nation.

Following are the several more or less distinct periods which have marked Canadian immigration since it began in 1600. Each of these more or less distinct periods is marked by influences which affected Canadian economic development.[12]

Year	Population	Characteristics
1660-1683	9,677	Permanent French settlements of fur traders and fishermen along the St. Lawrence.
1760-1784	160,000	British and American traders and settlers with Loyalist refugees From the United States.
1784-1815	350,000	Period of U. E. Loyalist immigration, and of many immigrants from Great Britain.
1815-1825	790,000	Period of British soldier settlements with many Scotch, Irish, and English immigrants; also a considerable number from the U. S.
1825-1841	1,750,000	Period of continued British Immigration, especially of the artisan, agricultural, and labor classes, and considerable immigration from the United States.

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[12] *Ibid.*, p. 35.

1841-1860	3,200,000	Period of greatest immigration from Great Britain of agricultural and artisan radical classes continued from both Great Britain and Ireland.
1860-1880	4,328,810	Period of slowing down of British immigration, owing to the absence of good free land grants in Ontario and Quebec, and a lack of railway connections with the Northwest.
1880-1900	5,371,315	Period of diminution of immigration from Great Britain and the continent, owing to the great free land grants opened up in the northwestern states.
1900-1914	8,000,000	Period of the greatest immigration from Great Britain, the U. S. and the continent.
1914-1922	9,000,000	Period of almost complete cessation of immigration on account of the World War and its after effects.
1922-1936	11,028,000	From about 90,000 immigrants in 1922; 135,982 in 1926, immigration fell off rapidly to about 11,000 in 1935-36.

IMMIGRATION STATISTICS BY YEARS

1871	27,773
1881	47,991
1891	82,165
1901	49,149
1906	184,064
1911	331,288
1916	55,914
1921	91,728
1926	135,982
1931	27,530
1934	12,476
1935	11,277
1936	11,643

CHAPTER IV

SURVEY OF ECONOMIC DEVELOPMENT

The principal industries of Canada and Newfoundland are: agriculture, including stock raising, dairying, fruit growing, and poultry raising; forestry; fur production; fisheries; mining; and electric power development. These are referred to as the primary industries of the country.

The secondary industries are generally considered as being those connected with construction, custom and repair, and manufactures.

Canada is becoming more important every year as an agricultural country. It is exporting not only grain, but also cattle to the British market, and when the rich prairie lands of the Northwest are brought fully under cultivation its agricultural produce will probably rank foremost in value of that of any nation in the world.

The early economic development of Canada was related very definitely with the exportation of furs, seal-oil and timber. The earliest records indicate an annual export value of £100,000. Prior to the year 1759 when the country with its population of 65,000 was transferred from the government of France to that of England, the annual exports amounted to £115,415. The principal trade was in furs, in pursuit of which the great forests were traversed by bands of resolute

CHAPTER IV

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The secondary industries are generally considered as being those connected with construction, custom and repair, and manufactures.

Canada is becoming more important every year as an agricultural country. It is exporting not only grain, but also cattle to the British market, and when the rich prairie lands of the Northwest are brought fully under cultivation its agricultural produce will probably rank foremost in value of that of any nation in the world.

The early economic development of Canada was related very definitely with the exportation of furs, seal-oil and timber. The earliest records indicate an annual export value of £100,000. Prior to the year 1759 when the country with its population of 65,000 was transferred from the government of France to that of England, the annual exports amounted to £115,415. The principal trade was in furs, in pursuit of which the great forests were traversed by bands of resolute adventurers. A few ships were occasionally built. Agriculture was neglected, if not actually despised at this time.

After England acquired the country, however, the cultivation of the soil attracted the attention of the settlers and trade developed very rapidly. In 1769 the exports of furs, oil, fish, etc. had grown to £355,000. Seventy vessels were employed in trade at that time; twelve were engaged in the fisheries of the St. Lawrence, and six were plying the West Indies route.

In 1799 and the three following years grain exports grew rapidly. In 1802, 1,010,000 bushels of wheat, 38,000 barrels of flour, and 32,000 cwts. of biscuits were sent abroad. The number of trading vessels at this time had grown to 211 with an aggregate tonnage of 36,000. In 1809 the first steamboat appeared in Quebec harbor.

In 1809, 1810, and 1812 Canadian trade benefited from the British import duty on Baltic timber. In 1809, 440 vessels with an aggregate tonnage of 87,825 arrived at Quebec. In 1810, 635 vessels arrived in the St. Lawrence, and in the same year 26 vessels with a tonnage of 5,836 were built in the province. In 1812, 532 vessels with a tonnage of 116,687 tons, cleared at the port, 37 of them being built at Quebec.[13]

As a result of the War of 1812, trade in the colony remained almost stationary from 1810 to 1820. On account of the attempt of Britain to protect Canadian trade and at the same

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[13] The Encyclopaedia Britannica, Volume 4, p. 777.

curb the trade of the United States with the West Indies, the export trade of the St. Lawrence was cut in half by 1822.

In 1826, duty on Canadian flour entering the West Indies was reduced, and by 1830 as a result of restrictions placed upon United States trade by Britain, the St. Lawrence trade had again reached peak proportions with 967 vessels clearing at Quebec. In 1831, 400,000 barrels of flour were exported.

By 1843 Canadian exports of wheat and flour amounted to half a million bushels and the same number of barrels. Timber trade also increased greatly, and by 1846, 1,699 ships were clearing at Quebec. The following year the mother country allowed the colony to regulate its own customs policy, with the result that trade with the United States was greatly accelerated.

In 1850 Britain's "Free Trade" measures relieved Canada from the effects of British navigation laws. At the same time gold was discovered in British Columbia, and coal on Vancouver Island. Other factors tending to promote the growing wealth and prosperity of the country were the final settlement of the vexed question of the "Clergy Reserves" and "Seignorial Tenure" in Upper and Lower Canada; The Grand Trunk Railway was nearing completion; Nova Scotia had its first railway; and by 1854 Toronto was in rail communication not only with Georgian Bay, but also with the whole Western United States.

Economic development of the country was further stimulated by Confederation in 1867. New railways were undertaken; new lines of steamships were established; foreign markets were sought and developed with the result that a high point in prosperity was reached by 1873. An unfavorable reaction set in at this time as a result of the depression in the United States.

The great expansion which took place in Canada's industrial development in the period from Confederation to the reaction of 1874 is shown in the following statement of the joint value of imports and exports for the intervening years:[14]

EXPORTS and IMPORTS

1867	$131,027,532
1868	130,889,946
1869	148,387,829
1870	170,266,589
1871	194,070,190
1872	217,801,203
1873	217,565,510
1874	201,116,963

Following the reaction of 1874, the continued economic development of Canada is shown by these further statistics:[15]

1881	$ 174,433,030
1891	200,205,692
1901	355,362,305
1906	519,224,236
1911	727,041,156
1916	1,249,811,772
1921	2,429,322,583
1926	2,247,896,879
1931	1,706,355,362
1934	1,099,752,696
1935	1,279,057,078
1936	1,411,749,480

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[14] *Ibid.*, p. 780.

[15] *The Canada Yearbook*, *1937*, Dominion Bureau of Statistics, p. xxxiv.

LEADING BRANCHES OF PRODUCTION IN EACH PROVINCE

A survey of production in the various areas of the Dominion made in 1934 reflects present-day activity in the leading branches of industry in each of these areas. A summary of the 1934 survey follows:[16]

THE MARITIME PROVINCES

Considered as an economic unit, the principal industry in the Maritimes during 1934 was manufacturing, which accounted for 23.6 per cent of the net production. The agricultural industry represented 25.3 per cent of the total, while mining comprised 16.0 per cent and forestry 13.4 per cent. The fisheries produced 7.8 per cent of the net total. Construction, electric power development, custom and repair, and trapping showed 7.1, 4.6, 1.9, and 0.26 per cent respectively.

QUEBEC

As usual, the value of the products derived from manufacturing in Quebec was far greater than that from any other industry. Manufactures, exclusive of the output of establishments connected with the extractive industries, contributed 49.5 per cent, while all manufactures on the same basis contributed 64.2 per cent. Agriculture accounted for 21.6 per cent; forestry 9.3, and electric power 7.9. Mining was little changed, with 5.3 per cent of the net total. Contruction followed with about 4 per cent.

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[16] *Ibid.*, p. 213.

ONTARIO

The net value of manufacturing production in Ontario during 1934 was 48.2 per cent of the total, or nearly $494,000,000 compared with 21.1 per cent for agriculture. Mining was third, as in 1933, but advanced from 12.5 per cent in 1933 to 14.2 per cent in 1934. Construction with 6.0 per cent, electric power with 4.2 per cent, and forestry with 3.5 per cent followed in order. About 53 per cent of the net manufacturing of the Dominion was contributed by Ontario and 32 per cent of the agricultural income was derived from that province.

PRAIRIE PROVINCES

Agriculture contributed 63.4 per cent of the value of the net output of the Prairies in 1934. Total manufacturing, which has continued to advance steadily in the past decade, made up 22.4 per cent of the total. Mining with 8.0 per cent and electric power with 3.4 per cent followed in order. In Manitoba agriculture made up 44.8 per cent of the total production, net manufactures 29.6 per cent, mining 8.5 per cent, and electric power 5.5 per cent.

In Saskatchewan, agriculture contributed 76.1 per cent, manufactures 8.5 per cent, and construction 3.6 per cent.

In Alberta, agriculture yielded 66.8 per cent of the net, mining 11.4 per cent, manufactures 11.3 per cent, and construction 3.0 per cent.

BRITISH COLUMBIA

The net output from manufacturing in British Columbia during 1934 was $82,841,189, or 44.2 per cent of all net production, but nearly half of this amount was derived from manufacturing processes closely associated with the primary industries, especially logging and fishing. Manufactures, eliminating this duplication, comprised 23.1 per cent of the net provincial output. Mining advanced to nearly 22.0 per cent, while forestry was greater with 19.8 per cent; agriculture with 14.9 per cent, and fisheries with 8.1 per cent followed in order.

CANADA

GROSS VALUES of PRODUCTION by INDUSTRIES, 1930-34 [17]

Industry	1930	1931	1932	1933	1934
Agriculture	$1,319,635,659	$883,820,884	$818,549,921	$890,164,311	$1,006,257,616
Forestry	440,352,351	288,674,002	195,025,352	197,325,273	236,089,129
Fisheries	63,743,353	39,654,811	33,665,822	35,736,596	45,661,143
Trapping	9,875,955	8,744,962	7,118,021	7,258,527	8,636,885
Mining	325,184,050	276,365,319	228,948,172	264,737,816	356,487,142
Electric Power	164,833,913	163,321,565	171,630,682	117,532,081	124,463,613
Total	2,323,625,281	1,660,581,543	1,454,937,970	1,512,754,604	1,777,595,528

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[17] *Ibid.*, p. 214

CHAPTER V

AGRICULTURE

In the early days of Canada the settlers with great difficulty eked out a scanty livelihood. Fishing, fur-trading and hunting offered the greatest opportunities. But as families landed and homes were established, the land was cleared and there was an increasing desire on the part of all to till the land. The results obtained from their crude efforts were so far beyond their expectations and it was so easy to become a landlord, as compared with conditions in the land of their birth, that farming made wonderful progress. As means of transportation were provided and markets opened up, the Canadian people, by common consent, described their country as the "Granary of the British Empire."

Agriculture, including stock raising and fruit growing, is the chief single industry of the Canadian people today, employing in 1931, 28.7 per cent of the total population gainfully employed, and 33.9 per cent or over one-third of the gainfully employed males. In addition, it provides the raw materials for many Canadian industries, and its products in raw or manufactured form constitute a very large percentage of Canadian exports.

AGRICULTURE IN EASTERN CANADA

Agricultural operations were first begun in what is now known as Eastern Canada 300 years ago. At that time vast forests, trackless except for scattered Indian trails, covered the greater part of this immense area of 717,000,000 acres. Today there are nearly 500,000 rural homes with their farm buildings in the area. 48,785,860 acres of cultivated land now replace the forest. The people have 155,643 rural telephones and 3,501 rural mail routes. Several million head of livestock and great flocks of poultry form a large part of the economic resources. 51 cities, 297 towns, and 404 villages are scattered over this land. Many hundred miles of electric railways, 140,460 miles of highways and 19,626 miles of railroad serve the population of 6,295,000 in the five eastern provinces.

EARLY SETTLEMENT

The first agricultural operations in Canada were the small patches of Indian corn grown by the Indians near their main settlements.

The earliest attempts at permanent European settlement in Canada were intended as agricultural settlements. At Port Royal, now Annapolis, in Nova Scotia, the French under de Monts in 1605 cultivated patches of land, and cows were brought to the settlement by Poutrincourt in 1606. Similarly, in the valley of the St. Lawrence, farming on a small scale appears to have been carried on as early as 1608 by Champlain, the founder of

Quebec, when cattle were imported and some grains grown. The first real farmer along the St. Lawrence, however, was Louis Hebert, who in 1617 began to clear and cultivate the land which is now the site of the Cathedral of Quebec. He was followed during the next 30 years by other settlers who came from France, bringing with them cattle, swine, sheep and poultry. They devoted themselves entirely to farming and established agricultural settlements at Three Rivers and at Montreal. It was in what is today Nova Scotia that the first wheat in America was grown; and the first mill in Canada was established there.

In the early settlements the agriculture was very primitive. However, the virgin fertility of the soil generally produced good crops in spite of the very crude conditions under which cultivation was carried on. We must not forget that the principal business of the early settlers of that time, however, was hunting, trapping and the trading of furs with the native Indians. The Indians would part very readily with great quantities of valuable furs for a few gaudy trinkets, and the early traders became wealthy at the expense of the poor ignorant red man. The French establishments were developed pri-

marily for the prosecution of this fur trade, and also to hold the country for France. Crops were grown to aid in feeding the resident population, and livestock such as horses, cattle, sheep, swine, and poultry was sent to the colonies to provide a local supply of such primary requirements as meat, hides, dairy products, and wool. However, as the resident population increased, agricultural settlement spread along the fertile coasts and river valleys of Acadia, and along the lowlands of the St. Lawrence River and its tributaries. Agricultural production grew in certain lines beyond the immediate requirements of the colony, so that in 1749 flour, wheat, and peas were being exported.

The first settlement at Port Royal was located in Acadia. This comprised the present provinces of Nova Scotia and New Brunswick. In 1686 the population was 851. The settlers grew wheat, oats, flax and a little corn. They raised cattle, horses, sheep, swine and poultry. Cultivation of the soil began in Prince Edward Island in 1713.

Although Cartier discovered New Brunswick in 1534, there was no agricultural development until an English colony settled there in 1762. The greatest legacy left by the Acadians when they were expelled from the colony was the dykes which they built, redeeming great areas of very fertile soil, and the fruit trees which they had planted.

RAPID DEVELOPMENT

About 1750, six thousand British colonists and large numbers of French settlers came and set up their homes. Following the Revolution 70,000 Loyalists came to Canada, Ontario receiving about 10,000 of them. Some of the expelled Acadians returned; some German settlements were established in Nova Scotia, and a large flow of immigration from Britain set in after the European wars of 1816. All of these settlers drove back the forests and began cultivating the fertile soil.

AGRICULTURAL HANDICAPS

The slowness with which agriculture developed was due in a large measure to the fact that the early settlers were not farmers but tradesmen, artisans and soldiers. Also, the larger returns which they received from fur-trading, hunting and trapping kept them from cultivating the soil. It was a tremendous task to remove the forests, and the second generation in Eastern Canada were more concerned with forestry than with agriculture. As late as 1859 the value of the forest products exported exceeded that of the agricultural products.[18]

The absence of markets gave settlers no incentive to produce more than they required for their own needs. Indian warfare in Acadia from 1710 to 1760, and the century of bitter feeling between the French and British following the fall of Quebec in 1759 hampered progress in agriculture. In 1850 it was still

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[18] W. P. M. Kennedy, Social and Economic Conditions in the Dominion of Canada, p. 69.

limited to the growing of cereals without fertilizers, and to the production of hay. During the War of 1812 the farmwork in Ontario was done largely by the women and children. Other handicaps were the failure of the potato crop in 1845, and the loss of the wheat crop a few years later in the Maritime provinces, and the ravages of the wheat midge in Quebec in 1829 and in Ontario in 1849.

AGRICULTURAL ADVANCEMENT

Increase in population, the development of industry and commerce and of the various means of transportation and communication lent a spur to agriculture. Better homes, barns and stables were built. Hand implements gave way to power machinery, such as the threshing-machine and the self-binder. Good livestock was imported for breeding purposes. The coming of the railroads and improved highways brought markets of the growing towns closer to the farms. When the price of wheat rose from 30¢ to $2.00 a bushel during the Crimean War many a farmer got his first real start.

The organization of agricultural societies which began in 1789, and the formation of provincial Departments of Agriculture together with the establishment of agricultural colleges aided the development of the industry in eastern Canada. In 1886 the "Experimental Farm" system was begun. Government Aid, education, demonstration and other organized efforts have helped to improve farming and raise the industry to its present place of

importance. Today there are scores of agricultural societies and cooperative associations. The United Farmers of Ontario alone has 60,000 members. School and district fairs are held annually everywhere.

LATER DEVELOPMENT

Mixed farming with some line of specialization such as dairying, beef raising, or bacon production, marks to a large extent the agriculture of Eastern Canada. The Annapolis valley of Nova Scotia and the Niagara district of Ontario are devoted to fruit growing. The total estimated area under field crops in 1931 was 20,658,000 acres.

The value of the livestock in Ontario in 1935 was $332,194,000; in Quebec $206,814,000; in New Brunswick $3,188,000; in Nova Scotia $34,648,000; in Prince Edward Island $12,149,000.

The principal field crops grown in Eastern Canada are: spring wheat, oats, barley, hay, potatoes, and corn. Other field crops are: peas, beans, rye, mixed grains, turnips, and beets.

Dairy products provide a large part of the income of the farmers. In 1931 the total value of the creamery butter produced was $34,331,339; the cheese produced was $28,296,919; and the condensed milk and milk powder manufactured amounted to $14,000,000.

The value of the fruit and vegetables grown in the Eastern provinces reaches many millions, apples alone in 1929 being valued at $17,365,330.

Large annual returns are received from poultry-raising. In 1931, there were 23,000,000 birds on the farms.

Bee-keeping, tomato and tobacco growing, and the production of bacon, beef, mutton, and wool also provide good financial returns.

In 1880 all the wheat, except 3.2 per cent which was grown in Manitoba, and all the oats and barley were grown in the Eastern provinces. In 1931, however, 93 per cent of the total wheat of Canada, 67 per cent of the oats, and 74 per cent of the barley were grown in the Provinces of Manitoba, Saskatchewan and Alberta.

The total value of the field crops grown in Eastern Canada in 1870 was $111,116,606. No crops at that time were grown in what are now the Western Provinces. In 1931, however, the value of the field crops grown in Eastern Canada was $818,731,750, while the Western Provinces produced field crops valued at $636,511,900.

STATISTICS of AGRICULTURAL PROGRESS in CANADA[19]

AREA OF OCCUPIED FARMS

1871	36,046,401 (acres)
1881	45,358,141
1891	58,997,995
1901	63,422,338
1911	108,968,715
1921	140,887,903
1931	163,119,231

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[19] Dominion Bureau of Statistics, The Canada Yearbook, 1937, p. xxx.

VALUE of FIELD CROPS

(Wheat, Oats, Barley, Corn, Potatoes, Hay)

1871	$111,116,606
1881	155,277,427
1891	194,766,934
1901	237,682,285
1911	384,513,795
1921	933,045,936
1926	1,104,983,100
1931	435,966,400
1936	599,421,400

VALUE of LIVESTOCK and POULTRY

(Horses, Cattle, Sheep, Swine, and Poultry)

* 1871	(No. of Head)	7,982,625
* 1881		8,830,644
* 1891		23,993,891
1901	(Value)	$274,374,916
1911		630,111,606
1921		872,996,360
1931		508,232,000
1936		568,828,000

* Values of live-stock and poultry for these years are not available. However, the number of head was recorded by the census bureau for these years, and the figures are included in the table above.

VALUE of DAIRY PRODUCTS

1871	(No Statistics available)
1881	$ 22,743,939
1891	30,315,214
1901	66,470,953
1911	103,381,854
1926	277,304,979
1931	191,389,692
1936	208,238,128

CHAPTER VI

AGRICULTURE in the PRAIRIE PROVINCES

In 1809 a settler on the Peace River wrote in his diary: "We have cut our barley and I think it is the finest I ever saw. Wheat, oats, rye, and peas could grow well on the plains around us." Fifty years later a Governor of the Hudson's Bay Company told the British Government that all the territory west of the Red River was only fit for pasturing buffalo, and agriculture in that area had not been successful. It was not until after Confederation and the building of the Canadian Pacific Railway that the Western Provinces became known as a great agricultural country.

Almost at one bound the Canadian West passed from a stage of pathless prairie inhabited by Indians and buffalo, to an active farming area, with its homesteads, roads and fences. The immigration policy of 1896 brought settlers from the old world to the Western plains. The range lands were broken up into 160-acre farms.

SCIENTIFIC SURVEYS

The early settlers had the impression that the western lands were practically unlimited in their richness and fertility. Later years, and particularly those following the World War, showed them that this was not true. Detailed and scientif-

ic surveys have recently been made, and today each of the Prairie Provinces has a Survey Board which studies and reports upon soil conditions and makes every effort to work with the farmers in solving the problems created in recent years by continued droughts, the grasshopper scourge, the apparent lack of soil fertility, and erosion and dust storms. As many as eight different types of soil have been identified in Manitoba alone.

DEVELOPMENT of CULTIVATION

Western agriculture has developed by three kinds of cultivation. First, it was necessary to plow the virgin prairie to a depth of three or more inches and leave it until the following spring and then work it up for seeding. It was cultivated again in the fall. This was known as the "Deep-breaking Method" and the first crop was usually flax. The second, and more general method, was to plow a wide shallow furrow before July. The land was again plowed at a later date and worked over with a disc harrow. The third process was summer-fallowing, which consisted in leaving a large portion of the fields idle each year.

In Alberta, drought is being overcome by irrigation. There are there today 19 different irrigation projects, comprising 5,600,000 acres of land. Where irrigation is being carried on, however, the character of the farming is changing from grain-growing to live-stock raising.

CROP AREAS

Of the 200,000,000 acres of land available for cultivation in the three Prairie Provinces, only a small percentage is under crop. The Manitoba acreage is 20,000,000; that of Saskatchewan is 85,000,000; and that of Alberta today is less than 8,000,000.

INCREASE in PRODUCTION

In 1900 the Middle Western territory produced 17,000,000 bushels of wheat from 1,870,000 acres. Twenty-two years later 385,000,000 bushels was produced from 21,500,000 acres. A like increase is also true of the other crops, such as oats, barley, rye, and flax. Taking all grains, there was an area in 1935 under crop of 36,000,000 acres which yielded 812,000,000 bushels. Saskatchewan, where 72 per cent of the people live on the land, produced 50 per cent of this total. This province has more acres under cultivation than Manitoba and Alberta together.[20]

In the northerly districts of Alberta wheat has been grown for more than 25 years. It is being grown today 100 miles north of the 60th parallel of latitude. In 1875 wheat from Fort Chipewyan was awarded first prize at the Centennial Exposition in Philadelphia. In 1893 wheat from the Peace River area won first prize at the Chicago World's Fair. At Fort Vermillion there are now two stone flour mills and a 25-barrel roller mill which grind annually from 30,000 to 50,000 bushels of wheat for the trading posts of the Far North.

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[20] W. P. M. Kennedy, Social and Economic Conditions in the Dominion of Canada, p. 78.

LIVESTOCK INDUSTRY

This industry has been developing quietly into quite large proportions. In 1891 it was confined largely to Alberta and southwestern Saskatchewan where the government had 1,801,209 acres of grazing land under lease to over 100 lessees, six of whom controlled more than 100,000 acres each. In 1892 there were 20,579 horses, 139,000 cattle, and 80,000 sheep on the ranches. The peak of the industry was reached in 1919 when Alberta had 800,000 horses, 1,584,000 cattle, 364,000 sheep, 446,000 swine and 4,426,000 poultry birds. In Saskatchewan stocks increased to 1,000,000 horses, 1,380,000 cattle, 432,000 swine, and 8,500,000 poultry birds. In Manitoba there were 800,000 cattle, 400,000 horses, 167,000 sheep, 250,000 hogs, and 3,000,000 poultry birds. Today with adverse economic conditions affecting Western Canada, the livestock industry looms up as the hope of the future.

PRINCIPAL CROPS

Several features are noticeable in considering the changes which have taken place in the production of field crops in the Western Provinces in recent years. Wheat has remained the most important crop. Of all the cereal crops, however, barley has shown the largest increase, while oats has remained almost stationary for the last fifteen years. The increasing importance of mixed grains, cultivated hay, fodder crops and improved pasture is, of course, occasioned by the development of the livestock industry.

A very radical change has taken place in farming practices in the Western Provinces during the past twenty-five years. While cereal crops have remained the most important factor in western agriculture, a large development of the live-stock industry in general and of the dairy industry in particular, is illustrated by the large increase in live stock numbers and by the increasing importance of cultivated hay, fodder crops, mixed grains, and improved pasture.

CHAPTER VII

FORESTRY

The value of Canada's forest products ranks next to that of her farms. Her export of newsprint is now greater than that of all other countries combined, and its export value to the country is exceeded only by that of wheat. British Columbia ranks first among the provinces in the production of lumber, and Quebec ranks second. More than one-fourth of Canada's forests are at present inaccessible for commercial use.

EARLY FORESTRY OPERATIONS

The early French settlers in Quebec were interested in the double occupations of collecting the rich furs from the Indian hunters, and clearing off the forests for tilling the fertile soil. Their interest in cutting down the great trees at first was merely to clear the land for agricultural purposes.

The English settlers realized the value of the white pine in ship-building, and developed a considerable European trade in both white and red pine which were used extensively by the European ship builders for masts and spars. Thre-fourths of the flatted timber produced in the Ottawa region in 1870 was of white pine. Cedar, red pine and tamarack - the latter being used for railroad ties- made up the balance.

The pine that was prepared for export was made into squared timber, measuring from 60 to 70 feet in length. A considerable trade in squared white oak timber was also developed to supply staves for the English and West Indian markets. Black walnut, bird's-eye maple and curled maple were in special demand in England for cabinet and fancy work. The sugar maple was also found to be valuable for the excellent sugar yielded by its sap. By 1870 the annual sugar yield had amounted to 17,276,000 pounds. The number of squared and flatted timber produced in the Ottawa region in 1870 was 302,268 pieces; and the number of unsquared logs for the same year amounted to 2,024,980.[21]

The square timber trade reached its maximum in the 60's. After that time it gradually declined until today it is out of consideration. Sawed lumber has replaced it as an article of export.

With the development of the lumber industry, the governments of the different provinces granted licenses to those engaged in the lumber trade to cut imber over vast tracts of land under the name of "Timber Limits." These were in most cases remote from the settlements; and much ability and foresight were required to make provision for the large bodies of men, horses and oxen that were employed in cutting down and preparing the timber for market, and transporting it to suitable points for rafting.

After the lumber camp had been provisioned and organized, the foreman selected the proper trees and lumbering proceeded

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[21] The Encyclopaedia Britannica, Volume 4, p. 773.

throughout the winter. Thousands of men were engaged in felling the trees, cutting them into logs, or hewing them into squared timber, and transporting them down the rivers to the place of export; or, as in later years, to the mills. Where the rivers were interrupted by falls, timber slides had to be constructed; and on some of the main channels, as on the Ottawa, the construction and maintenance of the chief timber-slides was undertaken by the government.

The work of the lumbermen was not primarily to clear the land. Only the finest trees were selected, and the same district would be gone over every twelve or fifteen years. In the new clearings in the vicinity of the lumbering districts, the farmer found a ready demand for all of his produce, and employment for himself, his horses and his oxen during the winter. In this way the lumbering business helped to promote the settlement of new districts, and attracted a population to localities which otherwise might have remained a wilderness.

In free-grant districts, as in Muskoka, where new settlers were engaged in their first hard struggle to transform the wilderness into farms, the earliest savings of the farmer were usually expended on a yoke of oxen; and thus provided, his services were welcomed by the lumbermen. On the breaking up of frost in the spring, the produce of the winter's lumbering was floated down the rivers. There, at suitable points on every available rapid or waterfall, mills came to be erected for sawing up the logs, chiefly for the English and American markets.

The squared timber for the foreign markets was put together in cribs and run down to the rivers where they were formed into great rafts, and so floated down the lakes and rivers to Quebec. There they were finally broken up, and shipped abroad.

It should be remembered that the earliest industry connected with forestry in Canada was that of shipbuilding. This industry did not appear until about the time of the American Revolution when peace had settled over the Maritimes. While the Acadians were a race of husbandmen, growing wheat, pease and rye; and raising cattle, sheep, swine and poultry; they also had developed a meager business as early as 1650 in building small boats for the shore fisheries of the time.

In the century preceding the Revolution the Acadians had scarcely cleared 300 acres of forest. But after the Revolution farms and settlements began to eat rapidly into the forests, and hamlets sprang up beside the empty harbors. Before the end of the century, the great industries of shipbuilding and fishing were in their vigorous infancy.

New Brunswick's chief wealth has always been her forests; and her two chief industries, lumbering and shipbuilding, sprang up shortly after she was granted a "Royal Charter" as a province in 1749, but agriculture languished. Population followed the waterways, the natural timber roads from the interior. Down to the time of the Crimean War, the timber trade was fostered by British legislation.

THE PULP and PAPER INDUSTRY

The manufacture of pulp and paper is a comparatively recent Canadian industry. Paper was first manufactured in Canada about one hundred years ago; but prior to 1860 no wood-pulp was used or produced. Rags, straw and other materials were used instead. The first paper mill was established at St. Andrews in Quebec in 1803 by United States citizens who obtained concessions from the seigneurs. The first mill in Upper Canada , which is still in operation, was built in 1813 at Crook's Hollow near Hamilton, and the Maritime Provinces entered the industry in 1819 with a mill at Bedford Basin near Halifax.

THE PULP INDUSTRY

In 1866 the first wood grinder in America was installed at Valleyfield, Quebec, and the production of wood-pulp by the mechanical process was begun. In the same year the first chemical wood-pulp mill in Canada was opened at Windsor Mills in Quebec. During the next decade the use of wood-pulp in paper making was extensively developed, and in 1887 the first sulphite mill was opened at Merriton. By the beginning of the century the output of the industry had exceeded $8,000,000. In 1907 the first mill in America to manufacture chemical pulp by the sulphate or kraft process was opened at East Angus in Quebec.[22]

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[22] Dominion Bureau of Statistics, The Canada Yearbook, 1937, p. 300.

In the boom years of the Great War the output jumped until in 1920 it had reached a peak of over $232,000,000. Following a drop, there was another peak reached in 1929 of $243,970,761. Decreases followed down to 1933, and increases set in again in 1934 and 1935.

The rapid development of this industry up to 1929 was due to the abundant water power adjacent to the pulp-wood forest areas, and to the increasing demand for newsprint in the United States. The industry in Canada includes three forms of activity - the pulp-wood operations in the woods, the manufacture of the pulp, and the manufacture of paper.

Nearly three-fourths of the pulp and paper production is located in Quebec and Ontario. Practically one-half of the pulp-wood is cut in Quebec. Most of the raw pulp-wood exported to the United States also comes from Quebec. Ontario manufactures a much larger percentage of her product into paper and thus keeps the larger portion of her pulp-wood products at home.

While the lumber production has been fairly uniform for the past thirty years, the pulp-wood and paper production have increased enormously, as stated above. This has been due largely to legislation in the provinces about 1898 prohibiting the export of unmanufactured pulp-wood from Crown lands. This brought the mills to Canada. Forty-five years ago the value of the pulp and paper exported did not exceed $200. In 1920 the Canadian mills furnished the United States $62,000,000 worth of pulp and $63,000,000 worth of newsprint. The total value of

the manufactured pulp and paper products is now $250,000,000.

THE PAPER INDUSTRY

The paper-making stage of the industry involves the consumption of wood-pulp and other paper stock. Accurate statistics regarding the industry are not available prior to 1917.

During 1935 there were 43 combined pulp and paper mills and 24 mills making paper only in Canada. These 67 mills produced 3,280,896 tons of paper with a total value of $129,078,386. Newsprint now forms about 85 per cent of Canada's annual paper output. Of the total output, Quebec produces 51 per cent; Ontario 31 per cent; British Columbia 9 per cent; and the Maritimes the remaining 9 per cent.

THE LUMBER INDUSTRY

The manufacture of lumber, lath, shingles, and other products of the sawmill is the second most important industry in Canada depending on the forest for its raw materials.

The production of sawed lumber in Canada in 1920 reached a total of over 4,000,000,000 board feet, the highest cut recorded since 1912. Production fell off a third in 1921, and then annual increases set in up to 1929, when a decline to 1932 followed. There has been a constant increase since that time.

British Columbia comes first in total production with 54 per cent of the total cut of lumber, and 86 per cent of the shingles. Ontario, Quebec, and New Brunswick followed in the order named.

Douglas fir was the most important kind of lumber sawed, being produced almost entirely in British Columbia. Spruce is sawed in every province; with hemlock, white pine, and balsam fir coming next in order of importance. Spruce is the leading timber tree in the Dominion. Until about forty years ago white pine, which now has third place, led in production. Ontario has produced the largest amount of pine for a great many years, and likewise, also, Quebec has led in spruce production.

British Columbia, Ontario, and Quebec are the chief lumber producing provinces. They have 3,698 mills engaged in the various lumbering activities.

In connection with the operations in the woods, it must be remembered that the forests not only provide the raw materials for the sawmills, pulp-mills, wood distillation, charcoal, excelsior, and other plants, but that they also provide logs and bolts for export in the unmanufactured state; and fuel, poles, railway ties, posts and fence rails, mining timber, piling, and other primary products. Among the minor forest products are Christmas trees, maple sugar and syrup, balsam gum, resin, moss and tanbark.

PRODUCTIVE FOREST LAND of CANADA[23]

Quebec	392,422 (sq. mi.)
Ontario	275,523
British Columbia	249,500
Alberta	216,192
Saskatchewan	178,795
Manitoba	124,439
Yukon	70,067
New Brunswick	25,407
Nova Scotia	17,733
Prince Edward I.	2,081
Total	1,552,159

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[23] *Ibid.*, p. 54.

EXPORTS of WOOD, WOOD PRODUCTS, and PAPER[24]

1874	$ 26,817,715
1891	25,351,085
1901	33,099,915
1906	45,716,762
1911	56,334,695
1916	83,116,282
1921	284,561,478
1926	278,674,960
1931	230,604,474
1934	143,142,398
1935	160,932,709
1936	181,831,743

LUMBER PRODUCTION[25]

1916-1920 Average

Leading Species	M Board Feet
Spruce	1,355,081
Douglas Fir	742,871
White Pine	688,201
Hemlock	265,839
Cedar	133,156

Total 3,930,252 M Board Feet

Value $107,224,031

PULPWOOD PRODUCTION

1916-1920 Average

Leading Species	Cords
Spruce	1,636,367
Balsam Fir	473,551
Hemlock	113,335
Jack Pine	20,032
Poplar	7,686

Total - 2,257,224 Cords

Value - $26,712,198

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[24] *Ibid.*, p. xxxii.

[25] W. P. M. Kennedy, *Social and Economic Conditions in the Dominion of Canada*, p. 98.

CHAPTER VIII

FURS

Canada has been esteemed from its earliest discovery for its valuable fur-bearing animals, and was prized chiefly on this account so long as it remained a dependency of France. For the sixty years following Cartier's expedition up the Gulf of St. Lawrence in 1535 the fur trade and fisheries received attention, but little in the way of colonization was attempted.

Champlain, who was employed in the interests of successive fur-trading monopolies, sailed up the St. Lawrence in 1603. In 1608 he founded the City of Quebec as a fur-trading station. From that time onward for a century and a half, settlers from France spread over the country, most of them being engaged in the fur trade. In 1629 there was formed under the direction of Cardinal Richelieu the "Company of New France," otherwise known as the "Company of One Hundred Associates." It was given a complete monopoly of the fur trade in the whole St. Lawrence valley for 15 years in return for promotion of colonization. It controlled New France until 1663.

In 1664 a new organization, the "Company of the West Indies," was formed to control French trade not only in Canada, but also in other parts of the world. But once more, in contrast

with English experience, the great trading company proved a failure as a colonizing agency and its charter was revoked in 1674.

It was out of the annual fishing trade which sprang up along the coast from Belle Isle to Cape Cod about 1540, and which later grew to such proportions that the fur trade developed. The fishermen, when riding at anchor in a bay or inlet, found that the savages of the neighborhood were always ready to part with their furs for a mere trifle. Since these furs sold in Europe for a high price, the practice grew up among the fishermen of bringing out each year a supply of trinkets to barter for furs. The returns were so good that in time some vessels made a specialty of the fur trade. Probably the first vessel engaging in the trade was the small French ship from Havre in 1569.

In 1580 a 30-ton barque from Saint Malo made a trip to the colony and an 80-ton ship from the same port followed it the following year, both of them engaged in the fur trade. Three ships came in 1583, and ten in 1585. In 1588 a monopoly of the fur trade was granted to two of Cartier's descendants.

By 1599 the trade was well established. Some vessels fished for cod and furs on the same voyage; and by the end of the century there was a great development of walrus fishing.

The fur trade can thus be seen to have been established as a result of the great demand for furs in the European market. From about the time of Charles I, large felt hats adorned with a surface of fur became the style. The hat makers soon learned that the beaver wool was spiccated, that is, it had fine barbs at the end of the hairs which made them stick to the felt. From that time on the demand for beaver became very great.

The first Europeans to get an idea of the fur resources of America were the fishermen already referred to in the Gulf of St. Lawrence. When they landed to dry their cod, they would meet the Indians and barter knives, fish-hooks and trinkets for their beaver robes.

CARTIER and HUDSON

The search for a route to the rich markets of the Far East helped to reveal to Europeans also the great fur resources of Canada. Cartier hoped to find this route for the French by way of the Gulf of St. Lawrence. He was turned aside by the Lachine Rapids, and so found the mangnificent water route running south of the great fur belt; and the French fur trade resulted.

About the same time, the English, like the Dutch, were trying for the polar shore of Asia. It was in this attempt that Henry Hudson discovered what is now the Hudson River-- another waterway leading toward the northern fur fields. The following year he discovered the Bay which bears his name, but died unaware of having discovered a route to the very edge of the greatest fur field in the world.

RIVALRY of the FUR TRADERS

Bitter rivalry developed between the French and the Dutch whose approach to this rich fur field was from the south. The Algonquins and the Hurons took the furs down to the French on the St. Lawrence, and the Iroquois were the middlemen for the Dutch at Albany. Rivalry between these Indian middlemen led to much bloodshed and destruction of settlements.

THE HUDSON'S BAY COMPANY

In 1670 King Charles II of England granted a "Royal Charter" to his cousin, Prince Rupert, and seventeen other noblemen adventurers, granting them imperial powers in connection with the trading rights into Hudson's Bay. They were also given trading rights in what is now Ontario, Quebec north of the Laurentian hills, all of Manitoba and Saskatchewan, the southern part of Alberta, and the south-east corner of the Northwest Territories.

The French took up the challenge of the English entry into the American fur trade. For ninety years there was a constant struggle for supremacy between the two races. But the fur trade proved profitable for the Adventurers, and by 1680 they had established forts in various parts of their territory. In order to meet the trade rivalry of the French, the Company had to penetrate the interior of the West. By 1774 they had made sixty inland voyages.

RIVALRY of the NORTHWEST COMPANY

By 1784 the Northwest Company, a group of nine different fur-trading interests, had become a powerful rival of the Hudson's Bay Company. They offered vigorous competition to it across the prairies, into the Athabasca country, across the Rockies, and even to the Arctic Ocean. They built forts side by side with the Hudson's Bay forts, and there was much bloodshed and violence until the two great rivals merged in 1821 under the guiding genius of Alexander Mackenzie.

THE HUDSON'S BAY COMPANY and the ECONOMIC DEVELOPMENT of WESTERN CANADA[26]

The part played by the Hudson's Bay Company in the economic development of Western Canada may be summarized as follows:

1. It is the oldest business institution on the American continent.
2. It is the oldest merchant trading company in the world.
3. It ruled the whole of Canada west of the St. Lawrence at one time and held it for the Empire.
4. It Operated the first chain store system.
5. Its men made the Northwest Passage.
6. One of its officers, Henry Kelsey, was the first white man to enter the prairies and the first to see a buffalo.
7. Another officer, Samuel Hearne, was the first white man to reach the Arctic overland.
8. It set aside 116,000 square miles of territory for the Selkirk settlers.
9. It evolved the "York Boat."

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[26] Hudson's Bay Company, A Brief History of the Hudson's Bay Company, p. 43.

10. It founded the cities of Winnipeg, Calgary, Edmonton, Victoria and others.

11. It introduced sheep farming into Canada.

12. It operated the first steamboat, the "Beaver," on the Pacific Coast.

13. It explored the interior of British Columbia and mapped much of the Arctic.

14. It established trade with Alaska and the Russians.

15. It conducted the first Experimental Farm in the West.

16. It owns and operates in Canada today:

    Ten large department stores;
    Two great wholesale establishments;
    Two hundred and twenty-five fur trading posts;
    Eighty-six steam and motor vessels;
    Six hundred sled dogs;
    Twelve hundred canoes;
    Two million acres of farm and pasture land;
    Numerous subsidiary companies, such as Land Settlement, Oil and Gas Exploration ,etc.

THE FUR TRADE TODAY

There is a remarkable diversity of activity connected with the fur trade. The Hudson's Bay Company conducts a general merchandising business in the frontier communities; it barters goods for furs with the Indians and the Eskimos just as it did two hundred and fifty years ago; it maintains winter freight lines into mining camps; it pays cash for furs at many agencies; it operates freight and passenger ships down the Mackenzie to the Arctic; it sends a ship north from Montreal each year into Hudson's Bay and the Eastern Arctic; it is engaged in the largest animal conservation project ever undertaken by private enterprise.

The flag of the Hudson's Bay Company flies over its great fur-trading posts from Newfoundland to British Columbia. Thirty of these posts are within the Arctic Circle, and many of them receive only yearly visits of mail and supplies. But even at these far distant places the Company's men still maintain the tradition of honorable dealings with the native people.

In many respects great changes have taken place in the fur trade since the early days. Some of these have been brought about by the railway, the motor vehicle, the aeroplane, and the modern highway. Increase in trapping and improved methods of capture, together with the advance of lumbering, agriculture and other industries, have driven some of the fur-bearing animals farther afield. The more widespread search for furs has resulted in a more thorough regulation of the trade and a greater effort at conservation of wild life. Altogether, the annual production of furs under modern conditions has increased rather than diminished; although some of the furs of the early days have declined in importance.

FUR EXPORTS

In 1667 exports of furs to France and the West Indies were valued at 550,000 francs. In 1850 the value of the raw furs exported was $93,872. In the early years of the 19th century, the exports of furs exceeded in value those of any other product. This has greatly changed in the meantime, yet the total output today has not declined, and Canada may still be described as one of the great fur preserves of the world. The chief furs

exported are: beaver, black and silver fox, marten, mink, muskrat and seal. The following table shows exports for recent years which are greatly in excess of the earlier years:[27]

EXPORTS of RAW FURS

1931	$13,544,088
1932	11,495,086
1933	11,180,052
1934	13,944,821
1935	15,224,342

NUMBER of PELTS TAKEN

1921	2,936,407
1926	3,686,148
1931	4,060,356
1934	6,076,197
1935	4,926,413

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[27] Dominion Bureau of Statistics, The Canada Yearbook, 1937, p. xxxii.

CHAPTER IX

FISHERIES

Fishing is one of the earliest and most historic industries of Canada. Cabot, in 1497, discovered the cod banks at Newfoundland when he first sighted the mainland of America. Fishing may well be regarded as the first industry to be systematically prosecuted by Europeans in what is today Canada.

During the period of French exploration of the St. Lawrence, 1534-43, the number of vessels of various nationalities engaged in the fishing trade along the Atlantic coast had been gradually increasing. In 1542, there were 17 of these ships already established in the fishing industry.

Among the great industries of Canada, the fisheries stand fifth in the order of value. They produce, on the whole, from $35,000,000 to $36,000,000 annually. The domestic consumption of fish is stated to be not less than 100 pounds per head annually, as compared with 30 pounds per head in Britain.

The growth of the Canadian fisheries since 1870 is sufficiently shown by the following figures:

1870	$ 6,577,391	1905	$29,479,562
1875	10,350,385	1910	29,629,169
1880	14,499,079	1915	31,264,631
1885	17,722,973	1920	49,241,339
1890	17,714,902	1925	47,942,131
1895	20,199,338	1930	47,804,216
1900	21,557,639	1935	34,427,854

The fishing grounds of the Dominion are among the most extensive in the world. They fall naturally into three divisions: Atlantic, Inland, and Pacific. The principal fish of the Atlantic area are cod, lobster, smelt, haddock, herring and sardines; those of the Inland area are the fresh-water fish, whitefish, pickerel, trout, pike, and perch; those of the Pacific area are salmon, halibut and herring.

FISHING BOUNTIES

By an Act of 1882 for the development of the sea fisheries and the encouragement of boat building, provision was made for the annual distribution among the Atlantic fishermen of $150,000 in bounties, representing the interest on the amount of the "Halifax Award." An Act of 1891 increased the amount to $160,000.

THE MODERN FISHING INDUSTRY

The present fishing industry in Canada is in the main the growth of the past half century. No figures of production are available for the years prior to Confederation, but about 1836 the production of fish in what are now the three Maritime Provinces had an estimated value of $1,500,000. In 1870 the total was more than double this amount, and this in turn was more than doubled by 1878. In the 90's it passed $20,000,000 and in 1912, $34,000,000. The highest figure was reached in 1918, with over $60,000,000 but this was in a period of greatly inflated prices. From that year until 1921 there was a decline to $34,000,000. The world-wide depression affected the industry so that values dropped to $25,957,109 in 1932.

Among individual fish products, the cod and salmon have long been in the lead; during the past 30 years the salmon has taken first place from the cod. As a matter of fact, the heavy development and high price of lobsters in recent years have sent cod down to third place.

The lobster fishery has nearly trebled in value during the last forty years, yielding as it did in 1890, $1,868,492, and in 1935, $4,378,742. The salmon industry has also shown wonderful expansion. In 1882 it was valued at $1,795,732; in 1892 it had risen to $2,242,846; in 1921 it was $5,042,492; in 1931 $7,972,017; and in 1935 $12,540,307.

The cod fishery is one of the oldest industries of Canada, but it has not developed in the same degree as the salmon and lobster industries, but has remained non-progressive. In 1882 its value was $3,778,901; in 1892 $4,050,468; in 1902 $4,028,788; and in 1921 it had fallen to $3,693,201. In 1935 it was valued at only $2,758,140. Nor has the development of the herring fisheries been more favorable, for in 1882 it was valued at $2,130,000; in 1902 as $1,723,098; in 1931 as $2,330,044; and in 1935 as $1,817,540.[28]

The changing character of market demands accounts for the non-progress or decline of certain fish products. The tropical markets are changing, and the salt cod and other dried fish for which there was an enormous demand many years ago in South America, the West Indies, Spain and other countries are being

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[28] W. P. M. Kennedy, Social and Economic Conditions in the Dominion of Canada, p. 89.

replaced today by canned fish of various kinds, while the salt herring markets have also undergone a similar change.

The value of the salmon output for the period 1869-1935 was $448,000,000, and that of the cod $287,000,000. British Columbia now occupies the first place held for so long by Nova Scotia in the industry.

The current trend of the fisheries is upward in nearly every feature, including yields, value, capital invested and trade. The Dominion Department of Fisheries indicates gains both in the catch from the sea fisheries and in the value of the fresh-water fisheries as well for the current year, although statistics are not available in detail at this time. Export trade in fishery products for the year shows an increase of more than $500,000. In round figures it amounts to $25,358,000.

Whereas in the earlier days of the industry, progress was slow because of the crudely prepared and badly handled pickled and salted dry fish, present-day methods of handling the product by scientific chilling and freezing have done much to develop the market. Thirty-five years ago the smoked fish industry (finnan haddies, kippers, shredded cod, etc.) in Digby, Nova Scotia, did not amount to $25,000 per year, but modern methods have developed this smoked fish business to the point where it amounts to almost $1,000,000 a year.

CHAPTER X

MINING

Canada's mineral industry dates back to the 18th century and is associated with the explorations of the early French adventurers and colonists. In 1604, Master Simon, a mining engineer who accompanied Champlain discovered iron and silver in St. Mary's Bay, and copper at Cape d'Or, Nova Scotia. Champlain surveyed Cape Breton Island in 1607, but made no note of the coal seams that were easily visible in the cliffs. The first reference to coal in Nova Scotia was made by Nicholas Denys in his description and natural history of Acadia published in Paris in 1672.[29]

EARLY DEVELOPMENT

During the year 1730, metallurgical operations were carried on along the north shore of the St. Lawrence River between Montreal and Quebec; and bog iron ore was smelted on the St. Maurice River. The St. Maurice forges continued to operate until 1880.

As explorers moved westward, other discoveries were made, one of the most interesting being the galena deposits on Lake Temiskaming, less than ten miles from the present great Cobalt camp.

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[29] Dominion Bureau of Statistics, Annual Report of the Mineral Production of Canada, 1926, p. 11.

During the years 1843-63 iron ore was mined in Ontario; copper ore was produced in Quebec; alluvial gold was recovered from the gravels of the St. Maurice River; and lode mining of gold was carried on in Nova Scotia.

MINING IN THE WEST

Little or no record is available of mineral discoveries in Western Canada until the middle of the 19th century. Among the first of these was the finding of coal at Fort Rupert in 1835, and then in 1858 placer gold was reported along the Fraser and other rivers in British Columbia. These finds, and subsequent discoveries of copper-gold ores and silver-lead ores put British Columbia in the van of the Canadian mineral producing provinces, a position it has maintained except in 1899 and 1900 when placer gold production was at its height in the Yukon until 1907, when Ontario assumed the leadership.

MINING in NORTHERN ONTARIO

Copper had been discovered in the Bruce Peninsula at a very early date. Construction of the Canadian Pacific Railway across the continent was completed in 1885, and new districts were opened up to prospectors. It was in 1883 while blasting a cut for that railway near Sudbury, Ontario, that workers discovered the nickel-copper ore for which the area is now world-famous. The Sudbury mines in 1918, under the stress of the Great War, produced 90,000,000 pounds of nickel and 47,000,000 pounds of copper. Today after a production totalling more than $400,000,000, the two largest producers in the region still have

reserves of 100,000,000 tons of ore.

Railway construction through the boundary district of British Columbia assisted in the development of the copper-gold and silver-lead and zinc deposits of that area, and also of the coal beds of the Crowsnest Pass.

In 1903 when the Temiskaming and Northern Ontario Railway was being built through Northern Ontario, the rich silver ores of the Cobalt section were discovered. Since that time the mines of the district have produced over 10,000 tons of silver; practically the world's supply of cobalt; and 60,000,000 pounds of arsenic. Prospectors followed the railway and worked over the country on either side. This led to the discovery of silver in South Lorrain, and of gold in Porcupine and Kirkland Lake in 1909. In 1922 prospectors found ores containing copper, zinc, gold and silver in the Rouyn District of Northwestern Quebec.

SUMMARY of PRODUCTION

Each of these major discoveries referred to has been the cause of a marked increase in Canada's mineral production. In 1886, the first year that the "Geological Survey" issued complete returns of mineral production, Canada's total mineral output amounted to about $10,000,000, or about $2.23 per capita; in 1905, five years after the Yukon discoveries, production totalled $66,000,000, or $12.16 per capita. There was a $9,000,000 increase in 1935, $6,300,000 of which was due to the Ontario mines. Of this $3,300,000 was nickel and $1,300,000 of it was silver.

Since 1886 the value of Canada's mineral output has amounted to $4,012,709,252. Since that time, 1920, 1929 and 1936 appear to have been boom years, with the value per capita amounting to $32.77 in the case of the last year.

Canada stands first, according to the latest comprehensive figures of the Imperial Institute, in the world's production of asbestos, nickel and platinum; second in radium; third in gold, silver, copper and zinc; and fourth in lead and cobalt.

The world's supply of asbestos comes from Quebec; and more than half of its supply of nickel comes from a single mine in Ontario; while the richest placer gold region is in the Yukon. On the other hand, Canada is backward in the production of iron and steel, basic factors in the economic development of any country, and stands low as a producer of coal. However, the fact that the only deposits of good coal on the tide-water in America, both on the Atlantic and on the Pacific, are Canadian is a fact of much importance. It is responsible for the great metallurgical industries of Nova Scotia.

Until recently, the development of Canadian mineral resources has been largely due to foreigners, especially Americans; but Canadian skill and capital are now turning in this direction.

The mineral production is very unequally distributed among the provinces. Of the Maritimes, only Nova Scotia can be described as a mining area; gold and coal having been produced there for eighty years. Quebec is not of great importance, ex-

cept for its asbestos mines. Ontario produces a variety of minerals, on the other hand, such as nickel, silver, iron, etc.; while British Columbia provides gold, silver, copper, lead, zinc and coal.

METALS

Following the usual classification, the minerals of Canada may be grouped under the three heads: metals, non-metallic minerals, and structural materials.

Ores of thirteen metals have been mined in Canada- antimony, chromium, cobalt, copper, gold, iron, manganese, mercury, molybdenum, nickel, platinum, silver and zinc; and minerals containing a number of other metals have been found, though not mined on a productive basis. Only six of these metals are prominent economically - gold, silver, nickel, copper, lead and iron.

Gold mining in Canada started in British Columbia in 1859, followed by the boom conditions of the Klondike in 1896. There was also production in Nova Scotia to the extent of 6,863 ounces as early as 1862. Following discovery of the Porcupine camp in Ontario in 1909, which now produces more than three-quarters of Canada's total gold production, the industry has now reached an annual output of 3,284,890 ounces with a value of $67,904,700.

SUMMARY of GOLD PRODUCTION

1871	105,187 oz.	$ 2,174,412
1881	63,524	1,313,153
1891	45,018	930,614
1901	1,167,216	24,128,503
1911	473,159	9,781,077
1921	926,329	19,148,920
1931	2,693,892	58,093,396
1936	3,735,305	130,847,733

Silver production is fairly uniform. The Cobalt camp reached its peak production in 1911 with more than 31,000,000 ounces.

SUMMARY of SILVER PRODUCTION

1881	355,083 oz.	$ 347,271
1891	414,523	409,549
1901	5,539,192	3,265,354
1911	32,559,044	17,355,272
1921	13,543,198	8,485,355
1931	20,562,247	6,141,943
1936	18,231,419	8,227,840

NON-METALLIC MINERALS

Twenty-three non-metallic minerals have been reported for the Dominion, the more important of them being the mineral fuels, coal, petroleum and natural gas. Others of minor economic importance are asbestos from Quebec; gypsum from New Brunswick and Nova Scotia; salt from the wells os south-western Ontario; mica from Ontario and Quebec; pyrites from Quebec; abrasive corundum from Ontario.

To gain an adequate idea of Canad's vast coal reserves, reference must be made to the summary prepared by Dr. Dowling for presentation to the Twelfth International Geological Con-

gress held in Canada in 1913. This report estimated Canada's coal reserves to be 1,216,000,000,000 tons. This great total is sixty per cent greater than the total estimate for all of Europe; nearly equal to those for all of Asia, and equal to one-sixth of the total estimate for the entire world.

Most of the coal produced comes from Nova Scotia and Alberta, with British Columbia ranking third as a producer at present. In 1935 the production of these provinces was : Nova Scotia, 5,822,075 tons; Alberta, 5,462,894 tons; British Columbia, 1,331,287 tons.

SUMMARY of COAL PRODUCTION

1871	1,063,742 tons	$ 1,763,423
1881	1,537,106	2,688,621
1891	3,577,749	7,019,425
1901	6,486,325	12,699,243
1911	11,323,388	26,467,646
1921	15,057,493	72,451,656
1931	12,243,211	41,207,682
1936	15,214,606	45,752,806

STRUCTURAL MATERIALS

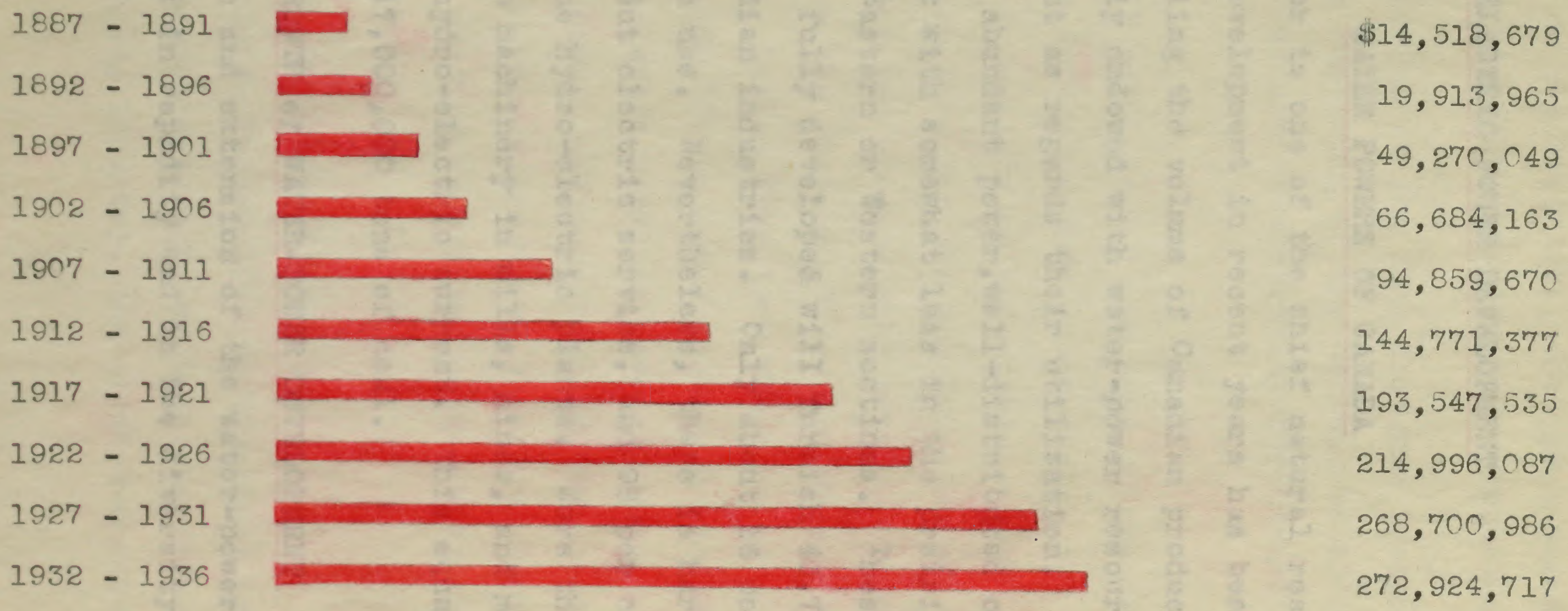
Building-stone, brick clay, and limestone are found in all of the provinces; but the greater part of them are found in Ontario. Quebec is the greatest producer of granite and building-stone of the provinces.

SUMMARY of MINERAL PRODUCTION

1881	$ 10,221,255
1891	18,976,616
1901	65,797,911
1906	79,286,697
1911	103,220,994
1921	171,923,342
1926	240,437,123
1931	230,434,726
1936	361,394,062

HOW THE VALUE OF CANADA'S MINERAL PRODUCTION HAS INCREASED[30]

(Average Value over Five-Year Periods)



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[30] W. P. M. Kennedy, Social and Economic Conditions in The Dominion of Canada, p. 107.

CHAPTER XI

ELECTRIC POWER DEVELOPMENT

WATER POWERS OF CANADA

Water-power is one of the chief natural resources of Canada, and its development in recent years has been an important factor in swelling the volume of Canadian production. Not only is Canada richly endowed with water-power resources, but it is in the forefront as regards their utilization. The streams of Canada furnish abundant power, well-distributed over the country as a whole, but with somewhat less in the prairie section than in either the Eastern or Western sections. These water-power resources when fully developed will furnish 43,700,000 horse-power for Canadian industries. Only about 16 per cent of this power is now in use. Nevertheless, there is hardly a village in Canada without electric service, and 98 per cent of this is furnished by the hydro-electric plants. More than 70 per cent of the Canadian machinery in mills, mines, and metal refineries is now run by hydro-electric current. This equals the work of approximately 17,000,000 tons of coal.

GROWTH of WATER-POWER DEVELOPMENT

The growth and extension of the water-power industry has been phenomenal in rapidity and in the diversity of the field

which it serves. Niagara is harnessed, so are the turbulent streams of Northern Ontario, the glacier creeks and torrents of the Rocky Mountains, the sturdy streams of the Yukon, the picturesque rivers of the Maritimes, the great waterways of Quebec, but as yet their might has been almost untouched.

The commencement of the long distance transmission of electricity at the beginning of the century resulted in the extensive development of hydro-electricity for distribution over wide areas.

Only a small beginning, 7 per cent of the estimated total, has been made in utilizing this great asset, but small as is the beginning, it yet presents an astonishing growth. In 1895 the first high tension line for the transmission of electricity in the British Empire was accomplished between a small power plant of 1,200 h. p. on the Batiscan River and Three Rivers, Quebec, at 11,000 volts. Dating from 1900 when the total installed horse power was 150,000 in small scattered plants and mills, its progress has been swift until we have at present nearly 8,000,000 operating horse power, and more than 25,000 miles of transmission and distribution systems scattered from Nova Scotia to the Yukon, in units varying from a few horse power to the 60,000 h. p. turbines of Niagara.

DEPENDENT INDUSTRIES

Many typical Canadian industries are dependent upon cheap power facilities. Among others might be mentioned the pulp and paper industry, the mining industry, the electro-chemical and electro-

metallurgical industry and the milling industry. In fact, the success of Canadian industry as a whole has been in great part due to cheaply available hydro power in unlimited quantities, while these specially mentioned industries have attained peculiar eminence for the precise reason that water-power could be obtained cheaply, conveniently, continuously and in large quantities.

Take, for example, the manufacture of pulp and paper. In 1890 Canada exported $120 worth of pulp and paper; by 1920 the export value of the same products was $214,421,546. The importance of cheap power here is seen from the fact that it takes practically 100 h. p. to make one ton of paper per day. It is not surprising, therefore, to find that the power used in this industry is practically restricted to hydraulic energy, and Canada's continued supremacy in this field rests on adequate and abundant power situated among extensive forest reserves.

Similarly, water-power plays its part in mining. Large scale operation in many cases would have been impossible without ample hydraulic energy at relatively low cost. Large blocks of power are required for electrolysis operations in refining many minerals. Many mines are placed so that rail haul on coal or untreated ore would be prohibitive. Hydraulic power will permit of their being worked at the source.

Hydro-power is finding wide use on the farms of the country, and the electrification of railways is proceeding at a fast pace.

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COAL EQUIVALENTS and EXPORTS - 1938

The present development of electric power represents an annual equivalent of 26,700,000 tons of coal, which, valued at $10 per ton, represents $267,000,000. By 1940 at the present rate of development these figures will have become 42,000,000 tons and $420,000,000.

Canada exports considerable quantities of hydro-electric power and has done so for a number of years. At present there are eleven exporting companies in New Brunswick, Quebec, Ontario and British Columbia selling power to the United States. The energy produced for export increased from 538,331,425 kilowatt hours in 1911 to 1,749,539,778 kilowatt hours in 1931, and to 1,448,412,230 kilowatt hours in 1936. This export offsets, to a certain extent, the import of coal from the United States.

PUBLIC OWNERSHIP of HYDRO-ELECTRIC POWER

When, in the early days of the 20th century, it became evident that the development of hydro-electric power would become a "Key Industry" in Canada, more especially in its coalless central provinces of Ontario and Quebec, a strong public movement arose in favor of conserving the water powers of the country for the public benefit instead of allowing them to pass into the hands of private corporations. This "Public Ownership" movement developed special strength in Ontario and finally led to the establishment of the Hydro-Electric Power Commission in 1903. Since then Maitoba, Nova Scotia, New Brunswick, and

Saskatchewan have established similar commissions on the Ontario pattern.

HYDRAULIC TURBINE HORSE-POWER in CANADA [31]

1891	71,219 h. p.
1900	173,323
1910	977,171
1920	2,515,559
1925	4,338,262
1930	6,125,012
1935	7,909,115
1936	7,945,590

CENTRAL ELECTRIC STATIONS

1917	1,844,571 h. p.
1920	1,897,024
1923	2,423,845
1926	3,769,323
1929	4,925,555
1932	6,343,654
1935	7,104,142

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[31] Dominion Bureau of Statistics, The Canada Yearbook, 1937, p. xxxiv.

TRANSPORTATION and COMMUNICATION

RAILWAYS

The first Canadian railway was begun in 1835. It was a 16-mile line between St. John's and Laprairie, Quebec. It operated with horses in 1836, and with steam the following year. About the same time, a six-mile line was built in Nova Scotia to haul coal from the mines to vessels in Pictou Harbor. A railway from Montreal to Lachine was opened in 1847, and another to St. Hyacinthe in 1848. In 1850 there were only 66 miles of railway in Canada.

THE GRAND TRUNK

The railway era in Canada really began in 1852 with the granting of a charter to the GRAND TRUNK to build a mainline between the two Canadas. The road was completed between Montreal and Toronto in 1856, and extended to Sarnia in 1859. Upon the completion of the Victoria Bridge across the St. Lawrence at Montreal in 1859, the Grand Trunk had a through route of 800 miles from Portland to Sarnia. During the next 30 years it acquired many important railways in Ontario and extended its lines to Chicago.

THE INTER-COLONIAL

An inter-colonial railway between the Maritimes and Quebec had been proposed as early as 1830, but it was not until 1853 that Nova Scotia undertook to build a line from Halifax to the New Brunswick border. The scheme broke down for lack of funds in both provinces, and in 1867 there were only 374 miles of railway in the Maritimes. Under the British North America Act, the government undertook completion of the road, and in 1876 it was opened to Riviere du Loup. Through leased lines the road was extended to Montreal.

THE CANADIAN PACIFIC RAILWAY

This road had been advocated as early as 1849. In 1871 the terms under which British Columbia entered Confederation bound the Dominion to commence the Canadian Pacific Railway within two years and to complete it within ten years. It was undertaken in 1874 but the government did not push the work. In 1880 it contracted for the completion of the line by a cash subsidy of $25,000,000, a land grant of 25,000,000 acres, and other considerations. The contractors agreed to complete the road by 1891, but they actually finished it in 1885. It became Canada's first transcontinental railway.

THE GRAND TRUNK PACIFIC

To a still more ambitious line, the GRAND TRUNK PACIFIC, extending from the Atlantic to the Pacific, aiming at extensive steamship connections on both oceans, and closely associated

with the Grand Trunk systems of Ontario and Quebec, the government gave liberal support as a national undertaking. The eastern section of 1875 miles, from Winnipeg to Moncton, where connection is secured with the winter ports of Halifax and St. John, was, under the Act of Incorporation, to be built by the government, and then leased under certain conditions, to the Grand Trunk Pacific Company for fifty years. The western portion, 1480 miles, from Winnipeg to the Pacific, was to be built, owned and operated by the Company itself, the government guaranteeing bonds to the extent of 75 per cent of the construction cost. This road was Canada's second transcontinental one.

THE CANADIAN NORTHERN RAILWAY

The third transcontinental railway was begun in 1896 with the completion by Mackenzie and Mann of the 125-mile line of the Lake Manitoba Railway chartered in 1889. It next acquired the charters of the Winnipeg and Hudson's Bay, the Manitoba and Southeastern, the Ontario and Rainy River, and the Port Arthur, Duluth and Western. It was aided by the Manitoba government, which desired to establish competition with the C. P. R., and it then secured the Manitoba lines of the Northern Pacific, and in 1902 completed its line from Winnipeg to Port Arthur. During the boom of the next ten years while the West was rapidly filling up, the Road secured government backing which enabled it to extend its lines westward to Vancouver and eastward to Montreal.

THE CANADIAN NATIONAL RAILWAYS

Canadian Railway mileage doubled between 1900 and 1915, increasing from 17,657 to 34,882 miles. The War came, immigration fell off, labor and capital were conscripted in Europe, and operating costs increased to the point where in 1915 in

order to meet interest on the bonds, the government had to come to the assistance of the railways. The government had guaranteed the bonds and there had been lavish encouragement of railway construction by government grants and loans. Over-building naturally resulted.

The principal parts of the Canadian National Railways to-day consist of the Grand Trunk Railway, 3,948 miles; the Canadian Northern Railway, 9,259 miles; the Grand Trunk Pacific, 2,840 miles; the National Transcontinental, 2,007 miles; and the Inter-colonial, 1,593 miles. In addition, there is the Prince Edward Island system, 279 miles; and the Hudson's Bay Railway of 334 miles.

RAILWAY MILEAGE[32]

1835	0 (mi.)
1836	22
1850	66
1855	877
1860	2,065
1870	2,617
1880	7,194
1890	13,151
1900	17,657
1910	24,731
1920	38,805
1930	42,047
1935	42,916

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[32] *Ibid.*, p. 636.

'AIR NAVIGATION

In 1902, W. R. Turnbull set up the first wind tunnel in Canada at Rothesay, New Brunswick, for a study of aeroplane propellers. In 1907 he worked with Dr. Graham Bell, Glen Cutiss, and Lieut. Selfridge, a U. S. army officer. Their work resulted in the first flight in Canada being made at Baddeck on December 7, 1907, by the "Cygnet," a tetrahedral kite, towed by a steam tug. In 1909 the first aeroplane made its half-mile flight thirty feet above the ice at Baddeck.

From 1908 to the outbreak of the War, progress was rapid. 2,900 planes had been built by the end of the War, and a Royal Canadian Naval Air Service had been organized for coast patrol. At the close of the War, the large number of trained pilots and surplus aircraft resulted in great activity in flying. In 1919, forest air patrols were established, and as a result of mining activity at Rouyn, Quebec, the first regular freight and passenger air transport service was begun in 1924. Since then expansion has been rapid. As a step in establishing a chain of airports across Canada, and also to provide for the training of personnel, the flying-club movement was started with the offer of government grants and gifts of aircraft. Twenty-three clubs were established in the principal cities of Canada in 1928-29. Aerodromes esatablished by these cities formed the nucleus for Trans-Canada Airways.

Civil aviation has now become so important a part of Canadian transportation that its administration has been transferred to the new Department of Transport.

AIR TRANSPORTATION[33]

1. MILEAGE FLOWN

1921	294,449 (mi.)
1926	393,103
1931	7,046,276
1934	6,497,637
1935	7,522,102
1936	7,803,942

2. PASSENGER MILES

1926	631,715
1931	4,073,552
1934	6,266,475
1935	7,936,950
1936	19,859,626

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[33] *Ibid.*, p. xxxviii.

COMMUNICATION

TELEGRAPHS

During the early period of railway development, the construction of telegraph lines was no less energetically carried out. At the end of 1874, the Montreal Telegraph Company had 23,267 miles of wire and 1,288 different offices. The Dominion Telegraph Company, organized about the same year, had its head office in Toronto, and in a short time had 6,000 miles of wire, connecting 300 different offices. The British Columbia Telegraph Company, which was taken over by the government when the province joined the Dominion in 1868, already had its head office established in Victoria, and had 21 offices on its lines, the remotest of which was 557 miles distant.

DOMINION GOVERNMENT TELEGRAPH SERVICE

This service is operated by the Telegraph Branch of the Department of Public Works. Its general object has been to furnish wire communication for outlying and sparsely settled districts. Some of the districts served are: scattered settlements on the coasts of Cape Breton; Campobello, Grand Manan and other islands in the Bay of Fundy; Prince Edward Island; the north shore of the Gulf of St. Lawrence; islands in the Great Lakes, such as Pelee and Manitoulin; northern outlying districts of Saskatchewan, Athabasca, and the Peace River country; the coasts of Vancouver Island and British Columbia; and the Yukon settlements.

TELEGRAPH SYSTEMS

The Canadian Telegraph systems are composed of lines owned by the Dominion Government, and by chartered railway and telegraph companies. The Canadian facilities, in proportion to population, are among the most extensive in the world. In the operation of railways and in connection with market and press reports, the service to the country is invaluable.

SUBMARINE CABLES

Sixteen transoceanic cables have termini in Canada today--fourteen on the Atlantic and two on the Pacific coast. In addition there are eight cables between coast stations in Canada and the United States. Since the cable first came into commercial use in Canada in 1866, its development has been rapid.

The Atlantic cables are controlled by English and United States interests. The Pacific cable to Australia and New Zealand has been in use since 1902, and is owned jointly by the governments of Australia, Great Britain and Canada. As a result of the recommendation of the Imperial Wireless and Cable Conference in 1928, the Pacific and West Indian cable was disposed of to a company formed to take over all Empire-owned cables, and to lease the Empire owned beam wireless systems.

MILEAGE OF GOVERNMENT TELEGRAPHS[34]

1881	1,947	(mi.)
1891	2,699	
1901	5,744	
1906	6,829	
1911	8,446	
1916	10,699	
1921	11,207	
1926	10,722	
1931	9,300	
1935	8,884	

MILEAGE OF ALL OTHER TELEGRAPHS

1891	27,866
1901	30,194
1906	31,506
1911	33,905
1916	38,552
1921	41,577
1926	42,239
1931	43,928
1935	44,150

TELEPHONES

(Note the growth after the War.)

1901	63,192
1911	302,759
1916	548,421
1921	902,090
1926	1,201,008
1931	1,364,200
1935	1,208,815

RADIO RECEIVING SETS

1926	134,468
1931	523,100
1934	707,625
1935	812,335
1936	862,109

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[34] *Ibid.*, p. xxxviii

CHAPTER XIII

TOURIST TRADE

Canada, with its magnificent range of recreational attractions, is becoming more and more the playground of the continent. In recent years the tourist trade has become an important source of revenue in many sections of the Dominion, materially affecting the balance of trade. It represents the economic disposition of natural assets in which Canada is particularly rich, namely: its picturesque scenery, its invigorating climate; its opportunities for hunting, fishing and boating, as well as for winter sports; for the exploitation of which a considerable capital expenditure has been made on hotel accommodation, improved highways and other attractions.

Those entering from the United States by automobile are by far the most important class of tourists. The business accruing to the Dominion in this manner represents some return for expenditures on highways which have been very large since the War. In order to attract this traffic, highways have been built through regions of picturesque scenery, such as the Rocky Mountains, Northern Ontario, the Laurentians and Gaspe in Quebec.

CLASSES of TOURISTS

Tourists who enter Canada may be divided into two broad classes:

(1) Those coming in by ocean ports;

(2) Those entering from the United States.

The latter class may be subdivided into entries by:

(a) Automobile;

(b) Rail or steamer;

(c) Bus, aeroplane, etc.

VOLUME OF THE BUSINESS[35]

In 1936 these classes are estimated to have spent in Canada respectively:

(1) $10,446,000;

(2) $245,317,000;

(a) $159,473,000;

(b) $64,844,000;

(c) $21,000,000.

The Department of National Revenue records the number of tourists entering Canada in automobiles from the United States. Estimates of the expenditures of this class of tourists in 1936, according to the provinces by which they entered, are as follows:

Maritime Provinces	$9,948,000
Quebec	33,163,000
Ontario	101,678,000
Manitoba	1,999,000
Saskatchewan	959,000
Alberta	1,039,000
British Columbia	10,687,000.

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[35] *Ibid.*, p. 582.

From 1924 until 1936 it was estimated that there was a very material balance of expenditure in Canada's favor on the part of visiting tourists over the expenditure of Canadian tourists abroad. This estimated balance is as follows:

1924	$ 88,029,000
1926	102,420,000
1928	167,708,000
1930	178,849,000
1932	155,045,000
1934	82,316,000
1936	155,958,000

During the years 1930-32 the tourist trade, in spite of successive declines, showed a surprising vitality as compared with the generally depressed state of trade and industry. In each of these years tourist expenditures in Canada constituted an "Invisible" export of greater value than any single commodity exported. The business contracted in volume of travel and expenditure in 1933 and 1934, but a pronounced upturn took place in 1935-36.

PRINCIPAL RECREATIONAL ATTRACTIONS

PRINCE EDWARD ISLAND - Marine scenery, sea bathing, brook and sea trout fishing, delightful summer climate, seaside resorts.

NOVA SCOTIA - Historic shrines, motoring, seaside resorts, surf bathing, sailing, deep sea fishing, big game, canoeing.

NEW BRUNSWICK - Extensive woodlands and waterways, moose hunting, salmon fishing, camping, canoeing, summer resorts.

QUEBEC - Old world atmosphere, motoring, famous resorts, big game and fishing, canoeing, winter sports.

ONTARIO - Great variety of developed summer resorts; good motor roads, extensive fishing and hunting areas, canoeing, provincial parks.

MANITOBA - Big game, bird shooting, trout and grayling fishing, lake resorts, Riding Mountain National Park, winter sports.

SASKATCHEWAN - Good bird shooting; moose, deer and caribou hunting; park and lake resorts; fishing; Prince Albert National Park.

ALBERTA - Famous national parks and resorts, mountain climbing, glaciers, big game hunting and fishing, pack trail trips, long canoe trips, winter sports.

BRITISH COLUMBIA - Magnificent scenery, mountain climbing, coastal trips, scenic motor roads, famous big game hunting and fishing, park areas.

YUKON - Land of the midnight sun, unexcelled sport for big game hunters (mountain sheep, mountain goat, grizzly bear, moose, deer), grayling and trout streams.

NORTHWEST TERRITORIES-- Large unexplored areas, Mackenzie River trip of 300 miles inside the Arctic Circle, Wood Buffalo Park.

CHAPTER XIV

ECONOMIC RELATIONS with the UNITED STATES

THE AMERICAN REVOLUTION

The American Revolution began in 1775. Its leaders tried to make the revolt continental, and invaded Canada hoping that the French would join them. They took Montreal and besieged Quebec during the winter of 1775-76; but the prudent leadership of Sir Guy Carleton saved Quebec, and in 1776 the Revolutionary army withdrew from Canada. Since that time any prospect of Canada's union with the United States has been very remote.

THE UNITED EMPIRE LOYALISTS

But the American Revolution profoundly affected the economic development of Canada. The country became the refuge for thousands of American Loyalists who would not desert Great Britain. To what is now Nova Scotia, New Brunswick and Ontario they fled in numbers reaching probably 40,000. Until this time New Brunswick and Ontario had contained but few European settlers; now they developed largely under the influence of the United Empire Loyalists. This meant that the American type of colonial life would be reproduced in Canada; but it meant also bitter hostility on the part of these colonists to the United States, which refused in any way to compensate them for their confiscated prop-

erty. But Great Britain did something; the Loyalists received liberal grants of land and cash compensation amounting to nearly £14,000,000.

More than half of the Loyalist newcomers settled in the neighborhood of the Bay of Fundy, particularly in what is now the Province of New Brunswick, and at least 10,000 of them made their way into Ontario and Quebec.

THE WAR of 1812

The war which broke out between Great Britain and the United States in 1812 was due chiefly to Napoleon's continental policy. The war seemed to furnish a renewed opportunity to annex Canada to the United States, and Canada became the chief theater of conflict. The struggle was most vigorous on the Niagara frontier. But in the end the American invasion failed, and the Treaty of Ghent, in 1814, left Canada's status unchanged.

NEW BRUNSWICK BOUNDARY DISPUTE

After 1815 United States settlers began to occupy the disputed territory between New Brunswick and Maine. Difficulties arose between the settlers and New Brunswick lumbermen. Maine called out troops to defend her rights, and the provinces mustered their militia to resist the American show of arms. However, joint occupation was agreed to until an amicable settlement in 1842 was arrived at, whereby Maine got 7,000 square miles and New Brunswick 5,000 square miles of the disputed territory. The settlement was made under the Ashburton Treaty.

RECIPROCITY with the UNITED STATES

Following the union of Upper and Lower Canada, the country became quite prosperous. The abolition of the British preference on Canadian wheat in 1846 brought about a depression in the flour mills of Montreal, and the adoption of "Free Trade" by England and of low tariffs by the United States in the same year, 1846, led up to the "Reciprocity Treaty" of 1854. It provided for the free exchange between the two countries of a selected list of natural products. The outbreak of the Civil War in the United States increased the demand for Canadian products, and Canada enjoyed an extensive and profitable trade with the United States during this period. But, owing largely to the unfriendly attitude of Britain to the Northern side during the Civil War, the United States cancelled the Treaty when its first term of years expired in 1865, and it has never since been willing to renew it in its entirety. As a result of the cancellation, United States citizens lost their rights to share in Canadian fisheries, but they refused in many cases to give up the rights and friction arose upon many occasions.

In the latter years of the Civil War, the advantage of the Treaty was so great to Canada that in the year before its abrogation the exports to the States amounted to $54,714,383. Yet even then the balance of trade continued to be in favor of the United States; and under operation of the Treaty, New York, Boston, Portland and other American seaports were so largely used for the trade of the British provinces, that the transportation traffic to and from foreign countries, in bond, over the railways and canals and in the ships of the United States became an impor-

tant element of revenue to them.

The immediate effect of repeal of the Treaty was to draw the British provinces into closer union; while the interchange of traffic, which from 1820 to 1866 had been largely in favor of the United States, underwent so great a change from 1866 to 1873 as to show a balance against the States and in favor of Canada of $51,875,008. Wheat, flour and provisions which were formerly sold to New York and Boston houses were sent through Canadian channels direct to the Maritimes, the West Indies and South America; and Canada thus entered into competition with the United States in its own foreign markets.

THE WASHINGTON TREATY

A number of difficulties and differences had been left to be settled between England, Canada and the American Union as a result of the Civil War. During the War American feelings had been aroused by the losses inflicted by the cruiser "Alabama," which, it was claimed, was allowed to leave a British port in violation of international law. Canadian feeling, on the other hand, had been greatly stirred up over the Fenian Raids, organized on American soil, which had cost Canada a considerable toll of money and life. In addition, there was an unsettled boundary dispute in British Columbia, and questions about navigation of rivers common to both United States and Canada presented themselves for settlement.

In 1869 the Imperial Government appointed a commission to settle the outstanding differences between the three countries, and the Treaty of Washington resulted in 1871. By it the

"Alabama Claims" and the San Juan boundary dispute were referred to arbitration; the United States was given the free navigation of the St. Lawrence in return for the free navigation of Lake Michigan and certain Alaskan rivers; and it was decided that a further commission should decide the excess value of the Canadian fisheries thrown open to the United States over and above the reciprocal concessions made to Canada. The British government requested the withdrawal of the claims for the Fenian Raids, agreeing to make good the claims of Canada in this respect.

Under the "Alabama" arbitration Great Britain paid to the United States damages of $15,500,000, while the German Emperor decided the San Juan boundary dispute in favor of the United States. The fishery commission, on the other hand, sitting in Halifax, awarded Canada $5,500,000 as the excess value of its fisheries for twelve years, and after much hesitation the United States paid this sum into the Canadian treasury.

TARIFF POLICY SINCE CONFEDERATION

During Mackenzie's administration, 1873-78, a severe business depression seized the whole continent of America. Dominion revenues showed deficits for several years. The factories of the United States, artificially stimulated by extreme protection, sought to dump their surplus products on the Canadian market to the detriment of Canadian industries. Meanwhile the Republic, which for many years had drained Canada of thousands of artisans to work in its factories, steadily refused to consider any suggestion for improving trade relations between the two countries.

Sir John A. MacDonald under the circumstances proposed a "National Policy," or, in other words, a system of "Protection" for Canadian industries. Mackenzie and his followers leaned toward "Free Trade" and held that a tariff should be used for revenue only. In the elections of 1878 MacDonald was returned to power by a large majority on his "Protectionist" stand. A tariff was then agreed upon and has remained ever since under all administrations, although it has been modified considerably from time to time. However, Canadians generally have come to regard it as the basis of their finance and the bulwark of their industry. As soon as it was adopted, there was an almost immediate lessening of the exodus of artisans to the United States, and an improvement in the revenue and a restoration of the national credit.

Important tariff revisions have been made from time to time, such as that in 1897 when a "Reciprocal" tariff was adopted; and that of 1898 when a British "Preferential" tariff was adopted.

TRADE AGREEMENT of 1935

A comprehensive "TRADE AGREEMENT" with the United States was signed on November 15, 1935. It secured for Canada reduced duties for several representative Canadian products in return for extension to the United States of the British intermediate tariff rates of 1907, exclusive of Canada's Empire "Preferences."[36]

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[36] *Ibid.*, p. 491.

TARIFF RELATIONSHIPS with OTHER COUNTRIES

(1) TARIFF of 1907 and EMPIRE PREFERENCES

A new Canadian Customs Tariff was adopted in April, 1907, providing for "Empire Preferences." With its amendments it is still in operation.

(2) TRADE AGREEMENTS with UNITED KINGDOM

The United Kingdom, between 1919 and 1931, granted preferences to Empire products on a much wider scope than the former tariffs provided for. A new "Trade Agreement" between Canada and the United Kingdom was signed in February, 1937, enlarging the scope of preferences still more and providing for a continuance of the agreement until 1940.

(3) TRADE AGREEMENTS with OTHER COUNTRIES

Arising out of some old British Treaties, later British Treaties or "Favored-Nation" clauses sanctioned by Canadian Acts of Parliament, Canada extends on a reciprocal basis "Most-Favored-Nation" customs treatment to the goods of many countries, including the following:

- Argentine Republic
- Austria
- Belgium
- Bolivia
- Brazil
- Columbia
- Costa Rica
- Czechoslovakia
- Denmark
- Finland
- France
- Germany
- Guatemala
- Haiti
- Hungary
- Italy

Japan

Latvia

Lithuania

Netherlands

Norway

Panama

Panama Canal Zone

Poland

Portugal

Roumania

Spain

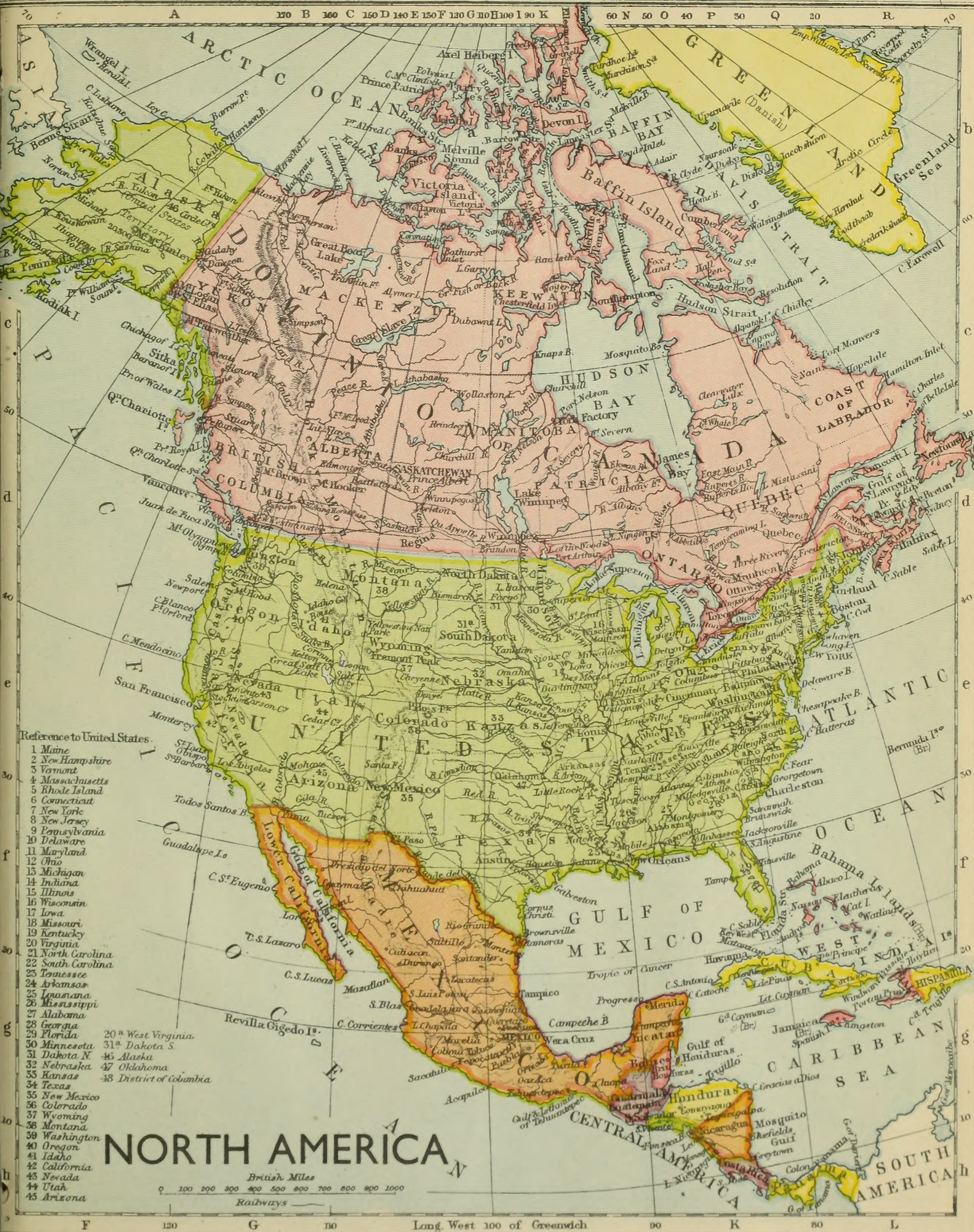
Sweden

Switzerland

United States

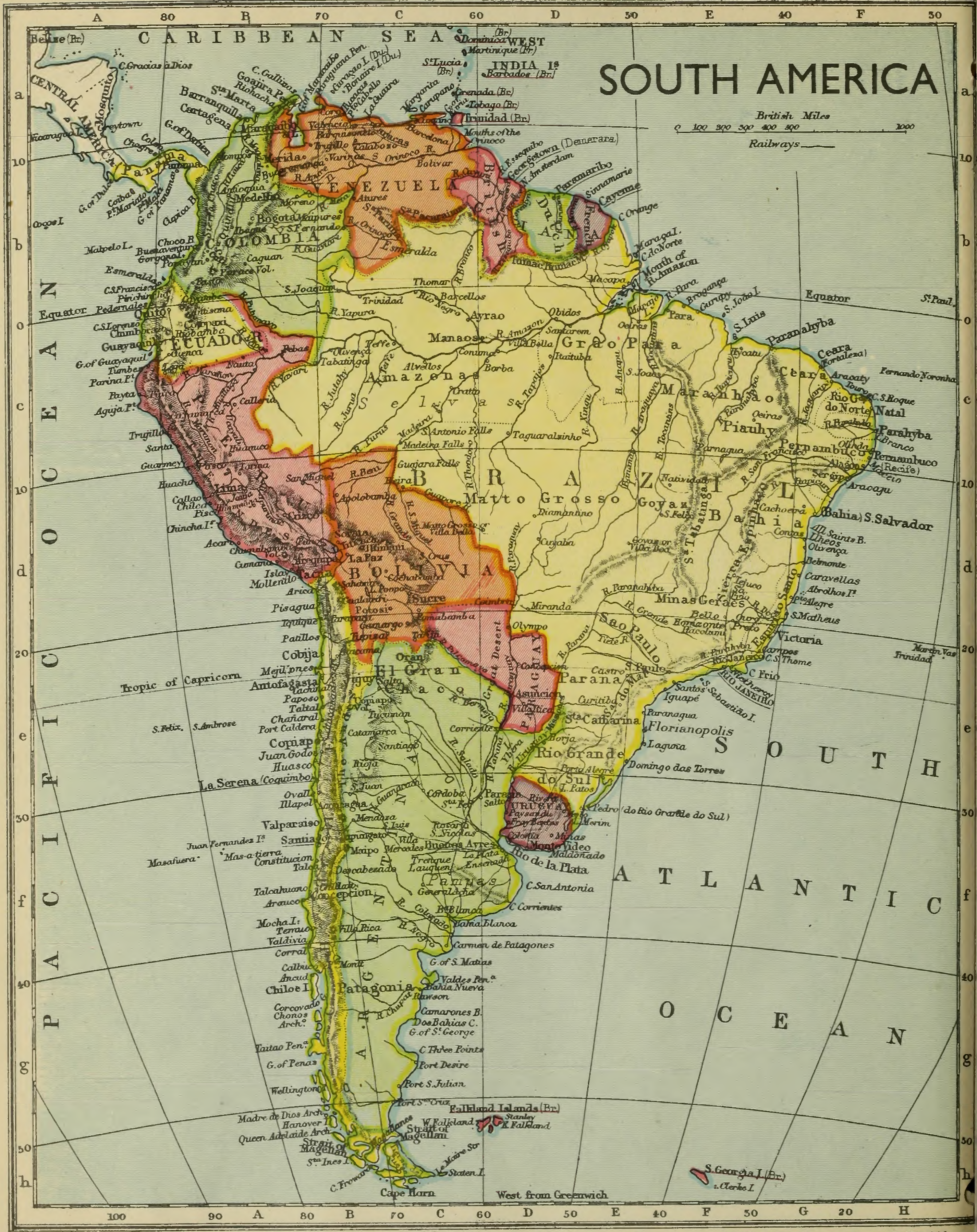
Uruguay

Venezuela.



NORTH AMERICA

N. AMERICA, 8,000,000 sq. m.; pop. 170,000,000. MEXICO, 769,000 sq. m.; pop. 16,409,000; Mexico, 960,915. BRITISH WEST INDIES, 12,300 sq. m.; pop. 52,000.



BRAZIL, 3,300,000 sq. m.; pop. 47,800,000; Rio de Janeiro, 2,320,000. ARGENTINA, 1,080,000 sq. m.; pop. 12,400,000; Buenos Ayres, 2,270,000.

CHAPTER XV

NEWFOUNDLAND

PHYSIOGRAPHY

The Dominion of Newfoundland consists of the great island at the mouth of the Gulf of St. Lawrence separated from the mainland of Labrador by the Strait of Belle Isle, together with that part of the Labrador peninsula that drains into the Atlantic. The island is roughly triangular in outline, each of its three sides being between three hundred and four hundred miles long. While the northwestern shore is fairly straight, the other two are indented with deep bays and fringed with a great number of rocky islands which form many fine harbors. The coast is mostly bold and rocky, and is about 2,000 miles in length.

The Long Range, on the west side, is the highest and most important of the ridges, varying in height from 1,000 to 2,000 feet. The wavy surfaces of the rocky hills are dotted with an immense number of small ponds and lakes, from which flow many brooks to form the larger streams.[37]

The tops of the rocky hills and ridges are for the most part scantily wooded or barren, while the river valleys and

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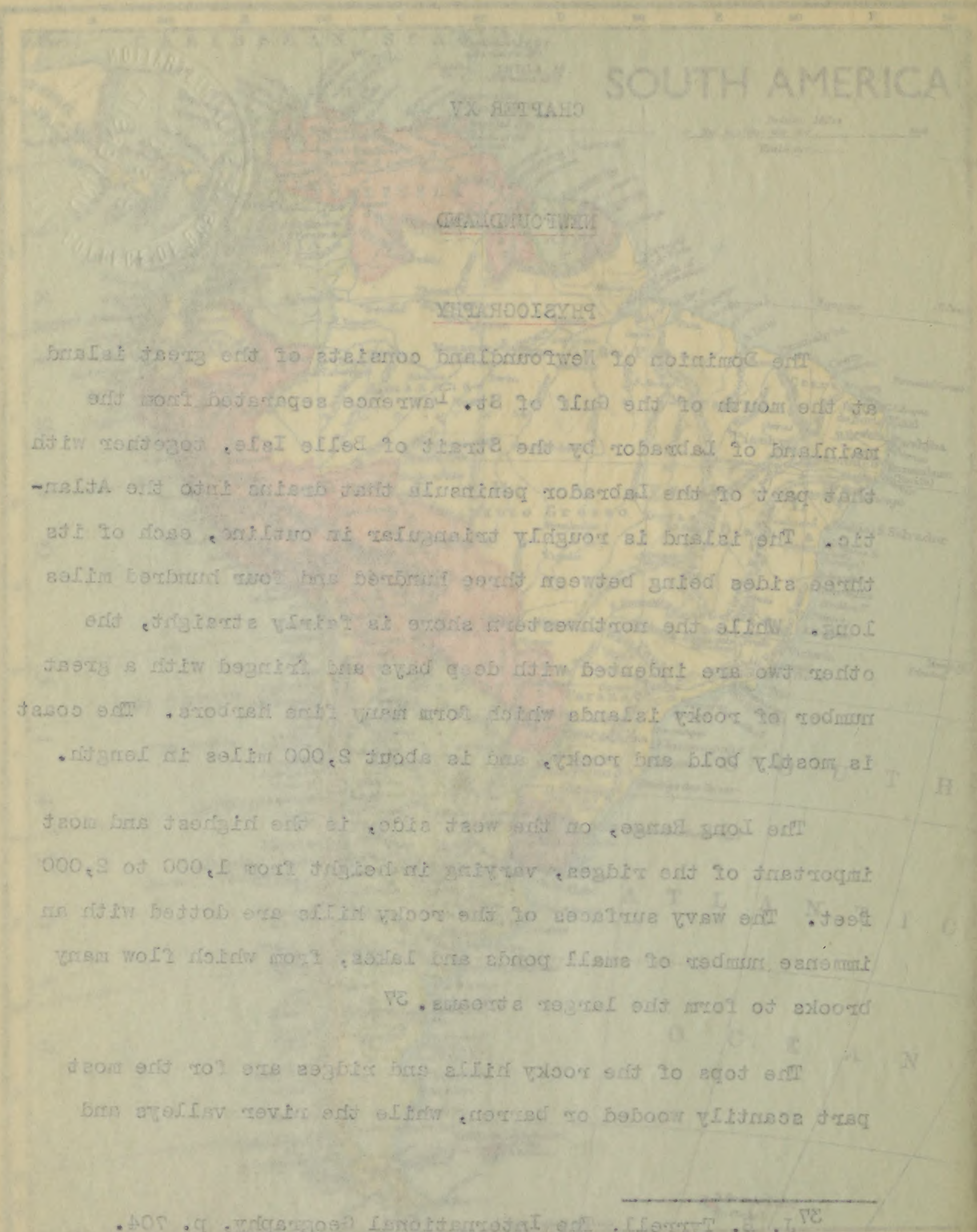
[37] J. B. Tyrrell, The International Geography, p. 704.


SOUTH AMERICA

the land at the head of the deep bays are usually thickly wooded with large and valuable timber, chiefly white pine, spruce, larch and birch.

Much of the interior is moorland and marsh, well-wooded around the numerous lakes. Most of the good land lies in the alluvial valleys. In many parts of the island there is very good land. Fine timber and good ground fit for cultivation surround the Gander River and Lake. There is also good agricultural land around Avalon Peninsula. There are also thousands of acres of splendid grazing land and fine pasture lands specially suitable for sheep.

CLIMATE

The Labrador Current from the Arctic, bearing extensive fields of ice and many icebergs, flows southward past the east side of the island, and tends to lower the temperature in summer, but very extreme temperatures are unknown. Dense fogs often hang over the south and east shores, but these do not extend many miles inland, and the weather in the interior is usually clear and bright. During the last twenty years the climate has improved and there is now no very heavy rainfall or intense frost before the end of November.

INDUSTRIES

FISHERIES

The great industry of Newfoundland is the fishery, which for the last few years has found 79 per cent of her exports

made up of its products. The surrounding ocean contains such an abundance of fish and seals that the catching and curing of them occupies almost the entire attention of the people.

Early in March, steamers and sailing vessels put to sea heavily manned, and seek the ice floes drifting down from the North on which the seals have brought forth their young.

After the sealing is over, the season for cod-fishing begins and lasts from June to November. The vast submarine plateau, known as the "GRAND BANKS," covered with a depth of from 10 to 160 fathoms of water, is the greatest fishing ground for cod in the world, and ships of many nations congregate there to gather the rich harvest from the sea; and the bold and well-trained sailors from Newfoundland, provided with a plentiful supply of bait in the form of capelin and squid which swarm on their shores, come in for a full share of this harvest.

The "Grand Banks" extend from Labrador the the Gulf of Maine, nearly 1,000 miles, and are from 50 to 300 miles wide. They have been the center of the cod-fishing industry for centuries and in area and production are the largest fishing grounds in the world. The most remarkable feature of this great industry is its stability and uniform success. As certain as seed-time and harvest, there comes every year to the shores of Newfoundland the regular supply of bait fishes in orderly sequence, herring, capelin, squid, and the cod. The seal fishery is much more variable, some years being a complete failure, other years a great success. The industry was formerly carried

on in sailing vessels; now it is carried on in twenty-three steamers.[38]

The fish when caught are cleaned, salted and dried in the sun on stages which may be seen almost everywhere. Herring, capelin, halibut and other fish are caught in quantity along the shore. Salmon are caught in the rivers, and of late years a considerable industry has grown up in the catching and canning of lobsters. Almost 90 per cent of the exports of Newfoundland consist of the products of the fisheries, more than half of them being dried codfish.

The herring fishery is another large industry. The movements of the fish are sometimes very irregular, and the year's catch is variable, unlike the steady uniformity of the cod-fishery which has continued for more than four centuries steadily productive. The Labrador herring, once so famous is now almost a thing of the past.

Aside from the major products of fish, seal and canned lobster, there is a worthwhile production of whale, seal and cod liver oil.

AGRICULTURE

Though there are large areas of good agricultural land in the interior, it has as yet been almost entirely neglected, since not only is the climate too cold for successful farming, but the fisheries have proved more profitable.

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[38] W. P. M. Kennedy, Social and Economic Conditions in the Dominion of Canada, p. 88.

There are 130,000 acres under cultivation or in pasture. About 54,000 tons of hay are raised; 541,000 bushels of potatoes; 11,000 bushels of oats; 65,298 bushels of turnips. There are nearly 9,000 horses on the island; 32,742 head of cattle; 78,025 sheep and 34,547 pigs. The farming around the capital is carried on by modern methods. On the west coast, where the very best land is situated, methods of agriculure are still very primitive.[39]

Because for so many years little attention was paid to any interest but fishing, the arable river valleys long lay idle and neglected. The government offered a bonus for cleared land in 1891 and in subsequent years, and since then agriculture has been gradually increasing in importance.

LUMBERING

This industry has been greatly increased by capitalists of Canada and New England. The chief woods are spruce, white and yellow pine, red pine, fir, juniper, birch, witch hazel, aspen and white maple.

MINING

Newfoundland is a large producer of copper and iron. It is the source of the main supply of the Dominion and Nova Scotia Iron and Steel Company. There are 40,000,000 tons in sight and it is shipped for about 25 cents a ton to Bell Island pier. Iron pyrites is exported to England for the manufacture of sulphuric acid, and $1,000,500 worth have been shipped to the United

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[39] D. W. Prowse, "Newfoundland," The Americana, Volume XV.

States. Asbestos and mica are common. Gold is worked on a small scale, and an excellent quality of petroleum is now being pumped on the west coast. Slate and marble are abundant. A large talc deposit has been opened, and an aerial tramway has been built to bring it to the coast.

The country is almost wholly unexplored and her great mineral treasures, especially her valuable coal deposits, have not yet been tested in an efficient way by borings.

FUR TRAPPING

Newfoundland is the home of the woodland caribou. All of the interior is one vast deer park where countless thousands of these fine animals range unmolested and unseen by man. Black bears; the gray wolf, now very scarce; the lynx; foxes; beavers and otters are native. Hares have been introduced and now swarm all over the island. The Arctic hare is a native. The trapping of these animals for their pelts is not a major industry.

MANUFACTURES

Shipbuilding is extensively carried on from the outports. There are also a very large number of sawmills, some very small and primitive, others on a large scale equipped with all the best and most modern appliances. Manufacturing is represented chiefly by the pulp and paper industry. At Grand Falls there are pulp and paper mills which are producing 200 tons of paper every twenty-four hours. A still larger plant is situated on the

Humber with a capacity of 400 tons a day. Nearly all the other manufactures are carried on at the capital, St. John's.[40]

TOURIST TRADE

Owing to the great variety of game animals noted above and the presence of grouse, ptarmigan, snipe, ducks and geese in abundance, and the fact that the rivers abound in salmon and trout, many tourists, especially those interested in hunting and fishing, visit Newfoundland in increasing numbers every season and today furnish a profitable and substantial source of income to the people.

ECONOMIC DEVELOPMENT

Newfoundland is a self-governing dominion of the British Commonwealth of Nations like its larger neighbor, Canada. It was discovered by John Cabot in 1497, at which time it was inhabited by the Beothuks, or Red Indians, a tribe whose exact affinities are now unknown; for the last survivor is said to have died in the early part of the 19th century.

Cabot's discovery had far-reaching consequences, since it gave the western continent to the English by right of discovery. The fame of the cod-fishing off its shores soon spread through the maritime nations of Europe, and many ships from France, Spain, Portugal and England resorted every year to the "Grand Banks," using the many harbors of the island as bases of operations.

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[40] W. W. Blackall, The World Book, Volume VII, p. 4,152.

The story of Newfoundland's economic development divides itself into four periods.[41]

FIRST or EARLY PERIOD

In the early period from 1497 to 1610 there was neither law nor government on the island. The English and foreign fishermen living there were ruled in a rough way by the valiant men of Devon, traders and pirates. In 1532 an English Governor was appointed, and during the next fifty years several futile attempts at colonization were made. Then for more than a century and a half colonization was discouraged, the English merchants who were amassing large fortunes by cod-fishing not wishing to compete with inhabitants of Newfoundland.

SECOND or FISHING ADMIRAL PERIOD

In this period from 1610 to 1711, there was a long struggle between the settlers and the English ship fishermen. The settlers were aided by their brethren from the American colonies, and the trade which began with them in 1641 so increased that by the time of the Revolution it amounted to $4,000,000. One of the largest items in this trade was New England rum.

THIRD or NAVAL GOVERNOR PERIOD

From 1711 to 1825 the island was under the control of naval governors and had a resident ruler and a form of settled administration. Misunderstandings between the white settlers and the native Indians marked this period. Starvation and disease, together with the firearms of the settlers, helped to

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[41] D. W. Prowse, "Newfoundland," The Americana, Volume XV.

destroy the interesting race of aborigines.

FOURTH or MODERN PERIOD

This period extends from 1825 to the present. In the earlier years the Home Government opposed settlement and tried to use the island simply as a fishing station for British fishermen. But few grants of land were made until stable government was granted in 1832, and then the country developed very rapidly. The people have shown marvelous powers of development, even under great clamities, invasions from the French, fires - even the great fire of 1892 which destroyed half of the capital and which was followed in 1894 by a bank crash which financially ruined nearly everyone on the island.

The real economic advance of Newfoundland dates from the advent of the railway in 1881. It provides regular tri-weekly communication with the United States and Canada. It was bitterly opposed by the fish merchants, but everyone now recognizes the part it has played in building up new industries. It crosses the island from St. John's to Port Aux Basques, passing through the most fertile and well-wooded districts, and it is expected not only to open much of the interior to settlement, but also to form a part of a line of rapid communication between Europe and America. Prior to the advent of the railroad, the usual means of communication between one place and another was by boat along the coast.

Today there are more than 850 miles of railroad on the island, but most of it is government owned. Transportation is good in districts near the coast.

Steamship communication with Canada, the United States and Great Britain has aided in developing the colony's trade. It has promoted industry by facilitating the importation of modern machinery, farming implements, structural hardware, etc.

TOWNS

St. John's, so called because the harbor was first entered by John Cabot on St. John's Day, is the capital. It is situated on the east side of Avalon Peninsula, at the head of a magnificent land-locked harbor, a mile and a half long and half a mile wide. Entrance to the harbor is through a deep, rocky passage only 200 yards wide at its narrowest part. In it the largest ships can ride in safety. It is the center of the fishing trade of the island and may become one of the most important ports of the Atlantic seaboard when the railway across the island is connected by fast steamers with the Canadian railway system; for it is nearer Europe than any other port in America. The population is 37,000.

Harbour Grace, the next town in size, stands on Conception Bay.

The original Atlantic cable lands in Heart's Content Harbor.

Other centers of population are Bonavista, 3,696; Twillingate, 3,542; Carbonear, 3,703; Burin, 2,719; Bay Roberts, 2,226.

STATISTICS of NEWFOUNDLAND [42]

	1881	1891	1921
Area of Newfoundland (sq. mi.)			42,000
" " Labrador			119,000
Population of Newfoundland		197,934	259,000
" " Labrador			4,106
Population of St. John's		29,007	37,007
" " Harbour Grace		5,184	6,466
Annual Imports	$ 8,150,000	7,000,000	9,510,991
" Exports	$ 7,870,000	6,750,000	*9,974,275

* Includes the following:

Codfish	$ 7,358,648
Seal	745,235
Canned Lobster	500,000
Miscellaneous	1,370,392
	9,974,275

CENSUS of OCCUPATIONS [43]

1914

Fishermen	67,000
Mechanics	5,700
Farmers	2,900
Miners	2,300

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[42] J. B. Tyrrell, The International Geography, p. 707.

[43] J. Russell Smith, North America, p. 38.

CHAPTER XVI

SUMMARY

In tracing the Economic Development of Canada and Newfoundland, the author has made abundant use of statistical information. Probably the best method of measuring a nation's advance over a given period is by means of statistics -- dry enough as figures, and yet containing much that is suggestive and encouraging. Some one has defined progress as the place where flow exceeds ebb, and if this test be applied to Canada since her beginnings, then she has made a steady, healthy, and hopeful progress, despite the cataclysm of a terrible war that took sixty thousand of her sons, saddled her with a huge war debt, and for a few years dislocated her commerce and transportation. Even that testing experience did not permanently arrest this ratio. The tale of the years has, as has been said, brought to pass many a prophecy concerning her.

Lord Carnarvon, in introducing the Canadian Confederation Bill in the House of Lords, said: "We are laying the foundation of a great state -- perhaps one which at a future day may even overshadow this country, but, come what may, we shall rejoice that we have shown neither indifference to their wishes nor jealousy of their aspirations, but that we honestly and sincerely, to the utmost of our power and know-

ledge, fostered their growth, recognizing in it the conditions of our own greatness. We are in this measure setting the crown to the free institutions which more than a quarter of a century ago we gave them, and therein we remove, as I firmly believe, all possibility of future jealousy or misunderstanding."

Lord Dufferin, when Governor General of Canada, said in his farewell address: "Love your country; believe in her, live for her, die for her. Never has any people been endowed with a nobler birthright or blessed with prospects of a fairer future. Whatever God has given to man is to be found within the borders of your ample territories."

In later years, Lord Lorne wrote in similar terms: "Other countries have seen their territories enlarged and their destinies determined by trouble and war, but no blood has stained the bonds which have knit you together as a free and order-loving population, and yet in this brief period, so brief in the life of a nation, you have attained to a union whose characteristics from sea to sea are the same."

And in still later years Sir Wilfred Laurier passed on his eloquent similes: "This cathedral (a British one) is an image of the nation I hope to see Canada become. I want the marble to remain marble, the granite to remain granite, the oak to remain oak. I want the sturdy Scotchman to remain the Scotchman; I want the brainy Englishman to remain the Englishman; I want the warm-hearted Irishman to remain

the Irishman. I want to take all these elements and build a nation that will be foremost amongst the great Powers of the world."

The author realizes that mere figures, however, tell but a very partial story. As suggested by the quotations just given of some of Canada's great leaders, there is left the more intangible aspect of a nation's life in the realm of the higher things. Measured by these standards, the people of the New Dominion are entitled to rejoice over their degree of progress. Canada is no longer a "colonial" possession of Britain, in the narrower sense of the word, but a member of the British Commonwealth of Nations. Canada was among the signers of the Treaty of Versailles, has a seat at the League of Nations Council and Assembly, and is also represented at Geneva by a government attachè. Canada has secured the right to make separate treaties, where they do not concern Great Britain. Canada has her national representative at Washington. She has had the compliment of having some of her legislation copied by other countries. In a word, the Dominion has the fullest degree of autonomy and self-government, while proud to be a member of the British Empire family, loyal to British standards and traditions.

THE CANADA-TO-BE

What is Canada to be?

If the short span of her life tells a remarkable story of progress, what may the similar succeeding span reveal? What mysteries do the unborn years hold? What marvels of

discoveries and inventions await their revelations? What future or fate awaits a world wherein the tide of events may be turned in a day? What of the tomorrow of the British Empire, and of Canada's partnership therein?

The answers lie in the lap of the gods. There is no penetration of the veil that separates the present moment from the next; and no astrology, ancient or modern, can supply the key to the future.

However, some inferences may be safely drawn from the past, some reckonings made, based on what has happened, and some conclusions drawn from the momentum of the past. Just as the Fathers of Confederation dreamed dreams and saw visions, so may we. As they took the long look beyond their hour and day, so too may we. And as many of their predictions have come true, or are in process of doing so,so too may ours.

If Canada's population trebled, for instance, between 1867 and 1927, from three to nine millions, why should not a similar increase marke the next jubilee term from nine to twenty-seven millions? With tides of immigration maintaining a steady flow, with the natural population increase sustained, and with improving national conditions that should lessen the drainage out of the country, this prophecy may well come true.

What changes will Canada and the world see in the coming decades? The air is full of significant signs of coming marvels. This is increasingly a wonder-world. What is the future of television? How much farther will the ether spaces be pen-

etrated in projection of human speech, perhaps some day and soon to the accompaniment of human vision. Will the world spaces so shrink that Canada will not merely talk with London, but with Australia and South Africa, bringing a day when there will be no foreign lands?

What, too, of the prophecies of travel-by air superseding transportation by land or sea? Will the Canadian some day be able to breakfast in Montreal, lunch in New York and dine in St. Augustine? Or cleave the sky in a few hours from Quebec to London?

If astounding discoveries have been made in many realms in Canada in the past, why not anticipate equally important ones in the coming years? Have we tapped all the riches hidden in the ribs of mother earth, in the gold and silver fields of Quebec and Ontario, the copper areas of Manitoba, the metals of British Columbia, or the oil reserves of Alberta? Has all the covered wealth of the pre-Cambrian strata been revealed?

Or, again, what will Canada's wheat crop be in 1987? If it was were ten million bushels in 1867, and 400 million bushels in 1926, and if only fifteen per cent of the tillable area is under cultivation, will the golden yield stay stationary now? A billion bushel crop is surely coming. There may be, too, other discoveries of wheat varieties such as the Marquis and Garnet of recent years, that will add materially not only to the wheat acreage in latitude but to the corresponding monetary value also.

If the whole structure of electrical development has come into being since 1867, and if only five million of the available forty-four million horse power available has been exploited, why should not the maximum be reached in the next quarter of a century? And along with it a corresponding industrial development through the radiation of power. There is no reason why there should not be the birth of many another Arvida, Rouyn, or Shawinigan Falls at the same time.

And if the electrical wonders in their application to the needs of the Canadian man - and woman too - continue to come to pass who shall dare to prophesy the outcome? Manufacturing has risen to first place in recent years. Today the figures are in the billion class-- three and a half invested in industry, nearly three in annual production, employing half a million workers, sustaining a third of the total population. Articles "Made in Canada" have increased from a few score to many hundreds. One wonders what story will be told by the whirring wheels of industry in the next half-century span. It is possible that the 23,000 plants will extend to the fifty thousand mark as new country is opened up and population increases and foreign trade expands.

The CANADA-TO-BE. The lure of it increases as its possibilities are unfolded, and when the economic development of today is measured in terms of yesterday. Canadians may well thrill at the thought of it. If the tale of the last sixty years is repeated in the same percentage for the next procession of the years, what a tale it will be! Who more than a

Canadian is justified in dreaming dreams and seeing visions? Who would not be a Canadian to live in such a land, with such a rich past and such an alluring future.

THE END

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